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IFSO15

20th WORLD CONGRESS

Vienna, Austria | August 26th-29th, 2015

Hofburg Imperial Palace in Vienna

www.ifso2015.com



<http://app.ifso2015.com>



International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO)

MESSAGE OF THE PRESIDENT OF THE CONGRESS

Dear Colleagues,

on behalf of the Austrian Society for Obesity and Metabolic Surgery it is my honor, privilege and pleasure to invite you to the **20th IFSO World Congress** to be held at the Hofburg Imperial Palace in Vienna, Austria, from **August 26th – 29th, 2015**.

We will continue in the tradition of the International Federation for the Surgery of Obesity and Metabolic Disorders to focus on the newly growing discipline of metabolic surgery, endolumenal and mini invasive approaches as well as the concept of team management. The role of metabolic surgery for the treatment of Type 2 Diabetes Mellitus, Metabolic Syndrome and its role in prevention of cardiovascular diseases will also be discussed in detail with the valuable contribution of researchers.

We will develop a scientific program of the highest standard covering global perspectives of this ever-evolving discipline that attends to our modern world epidemic that Obesity and Metabolic Disorders have come to represent.

Our distinguished keynote speakers and panelists will share their experiences and exchange ideas with the participants through postgraduate courses, lectures and round table discussions on bariatric and metabolic surgical techniques with the participants. We will also have courses and sessions encompassing basis of scientific research, medical writing and basic sciences for young bariatric surgery fellows and surgery residents.

The organizing Committee plans a green meeting which incorporates environmental considerations one aspect of sustainability that seeks to balance the social, environmental and economic concerns against business needs.

On behalf of IFSO and the Austrian Society for Obesity and Metabolic Surgery, the organizing team will welcome you to Vienna.

Welcome in Vienna 2015!

Karl Miller, MD, FACS

Congress President



MESSAGE OF THE IFSO PRESIDENT

Dear colleagues,

It is my honor, privilege and pleasure to welcome all of you to the XX. World Congress of the International Federation for the Surgery of Obesity and metabolic disorders (IFSO) in Vienna, Austria.

My friend Karl Miller wrote his welcome address as a President of IFSO in 2011 for the XVI. World Congress held in Hamburg. Since this very successful meeting in Germany the obesity epidemic has been showing still an unrestrained increase. Surprisingly, developing countries are not spared.

Data from the WHO suggest that countries with a sedentary life style as well as those suffering from an evidently lower social status are showing a rapid flourish in the incidence of their morbidly obese citizens. This epidemic continuously pushes research institutes worldwide to find the optimal solution for this life-threatening state. However, surgery proved over the past decades to be the most effective solution, in terms of both weight loss and remission of obesity-associated debilitating diseases. Analysis of the currently existing data showed that by the start of the current decade, the yearly performance of bariatric procedures has been exceeding 300,000 procedures, performed by more than 8.000 surgeons worldwide. Long-term follow-up studies showed that the outcome of this type of surgeries exceeds and tends to be more durable compared to the conventional dietary and medical regimens.

The Federation IFSO is growing and 60 countries are joining IFSO at the moment. The membership of surgeons is increasing worldwide. By means of 10 permanent committees IFSO will support the work of the bariatric surgeons worldwide. It is time for new guidelines, which will not focus on weight and BMI only. The name 'BARIATRIC SURGERY' should be replaced by 'SURGERY for OBESITY and METABOLIC DISORDERS'. Obesity is a disease and should be treated seriously, like all others, and for diabetics in most need of METABOLIC SURGERY.

The Congress President, Karl Miller, and the Austrian Society for Surgery of Obesity and Metabolic Disorders, the IFSO Scientific Committee and the Program Committee have planned an excellent scientific program, containing all parts of our field, including Postgraduate Courses and Live-Surgeries.

Vienna is located in the heart of Europe and well-connected to the world, so we can expect a high number of attendees.

I look forward to meeting you in Vienna, a wonderful place to visit and discover.

Warmest regards

Prof. Dr.med. Rudolf A. Weiner

President of IFSO

GENERAL INFORMATION

Congress President

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Executive Board of IFSO

Nicola	Scopinaro	Honorary president
Rudolf	Weiner	President
Natan	Zundel	President elect
Luigi	Angrisani	Immediate Past President
Pradeep	Chowbey	Senior Past President
Karl	Miller	President of the Congress
Almino	Ramos	Secretary/Treasurer
Scott	Shikora	Editor-in-Chief of <i>Obesity Surgery</i>
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Alberic	Fiennes	EC President
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Lilian	Kow	APC President
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George	Cowan	Historian

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Prager Gerhard Austria

Co-Chairman

Gagner Michael Canada

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Escalona Alex Chile
Hamdorf Jeff Australia
Weiner Rudolf Germany

Zundel Natan USA
Lee Wei Jei Taiwan

Local Scientific Committee

Chairman

Gerhard Prager

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Philipp Beckerhinn
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Alexander Klaus

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INTERNATIONAL SCIENTIFIC ADVISORY COMMITTEE

MEMBERS

Angrisani	Luigi	Italy	Talbot	Michel	Australia
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Chowbey	Pradeep	India			
Cohen	Ricardo	Brazil			
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Escalona	Alex	Chile			
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Himpens	Jacques	Belgium			
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Jorgensen	Jan	Denmark			
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Klaus	Alexander	Austria			
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Lau	David	Canada			
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Martinez	Tracy	USA			
Morton	John	USA			
Nguyen	Ninh	USA			
Pedraza	Luis	Mexico			
Ponce	Jaime	Canada			
Prager	Gerhard	Austria			
Ramos	Almino	Brazil			
Rios	Blanca	Mexico			
Schindler	Karin	Austria			
Segal	Adriano	Brazil			
Shah	Poonam	India			
Shikora	Scott	USA			
Stapleton	Connie	USA			
Stier	Christine	Germany			
Susleyici	Belgini	Turkey			

CONGRESS HIGHLIGHTS

POST GRADUATE COURSES

- One Anastomosis Gastric Bypass (formerly Mini Gastric Bypass) (Wednesday 26)
- Article of Excellence Course (Wednesday 26)
- Bariatric / Metabolic Surgery Complication Management (Wednesday 26)
- Bariatric / Metabolic Gastric Plication (Wednesday 26)
- Hemostasis Stapling and Suturing (Wednesday 26)
- Bariatric Endoscopy (Wednesday 26)
- Key Issues in Perioperative Care (Friday 28)
- Difficult Airway Hands-on Workshop (Saturday 29)

Hands On Training Animal Lab

Hemostasiology
 SILS and Reduced Port
 Anastomotic Techniques
 International Bariatric Club (Wednesday 26)

Plenary Session

Epidemiology of Obesity, Diabetes, Adiposity and Impact on Surgical Treatment
 Fast Track and Day Case Surgery
 Anesthesia and Preoperative Assessment and Optimisation
 Obesity and Organ Transplant
 Gastric Bypass and Banded Gastric Bypass-Technical Tips and Difference in Outcomes
 Surgery Below BMI 35 Beyond Diabetes
 Sleeve Gastrectomy: Optimizing Strategies for Best Outcomes
 Metabolic Surgery and Endolumenal Treatment Modalities
 Re-Do Surgery: Ultimate Techniques and Outcomes

Video Sessions and Live Surgeries

Complication Management
 Standardised Procedures
 Failure Management

Integrated Live Surgeries

Short Communications with Poster Presentations

Patients and Support Group Plenary Session

GENERAL INFORMATION

QUICK REFERENCE

DATES Wednesday, August 26 to Saturday, August 29, 2015

LOCATION **Hofburg Imperial Palace**
Vienna, Austria

SOCIAL EVENTS **Opening Ceremony & Welcome Reception**
Wednesday, August 26, 2015 18:30 – 20:00

Farewell Dinner (Viennese Ball)
Friday, August 30, 2015 19:30 - Midnight

LANGUAGE The official language of the congress is English.

EACCME AND CME CREDIT The 20th IFSO World Congress will be accredited by the European Accreditation Council for Continuing Medical Education (EACCME) – number of points pending - and by the Austrian Medical Chamber.

AMA/PRA CREDITS : Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME credits to an equivalent number of AMA/PRA Category 1 Credits™. Information on the process to convert EACCME credit to AMA credit can be found at <http://www.ama-assn.org/ama/pub/education-careers/continuing-medical-education/physicians-recognition-award-credit-system/other-ways-earn-ama-pra-category.page?>

REGISTRATION : Please see below opening hours of the registration desk.

Wednesday, August 26	07:00 – 20:30
Thursday, August 27	07:00 – 19:30
Friday, August 28	07:00 – 18:30
Saturday, August 29	07:00 – 13:30

EXHIBITION : Please see below opening hours of the Exhibition

Wednesday, August 26	09:30 – 20:00
Thursday, August 27	09:30 – 16:30
Friday, August 28	09:30 – 16:30
Saturday, August 29	09:30 – 13:00

USEFUL TIPS ABOUT VIENNA

Passport and Visas

All non-residents of the EU are required to have a valid passport.

Participants should check regarding visa requirements for travelling to Austria. Applications should be made to the nearest Austrian Embassy or Consulate as soon as possible. Citizens of member states of the European Union and the USA do not need a visa.

Travelling in Vienna

Information about available tickets and detailed line plans can be found at <http://www.austropa-interconvention.at/congress/info/transport.asp>.

Insurance and Liability

Participants are advised to arrange whatever insurance they consider necessary. No responsibility can be assumed by the Congress for personal accidents, sickness, theft, or property damage suffered by the participants.

Climate

Weather in August is usually warm and sunny (18-28°C). However, there is some possibility of brief showers. Thus, a jacket and an umbrella may be useful.

Electricity

The electrical current is 230 volts, 50 Hz.

Banking

Bank hours are:

Monday - Wednesday, Friday 8:00 am - 12:30 pm and 1:30 pm - 3:00 pm

Thursday 8:00 am - 12:30 pm and 1:30 pm - 5:30 pm

Currency

Since the beginning of 2002 the EURO is the official currency in Austria. 1 Euro = 100 Cents.

Coins: 1, 2, 5, 10, 20, 50 Cents; 1, 2 Euros

Banknotes: 5, 10, 20, 50, 100, 200, 500 Euros

Money can be changed at the airport, at banks, exchange bureaus, and larger hotels.

For a cash advance, credit cards and Maestro-cards can be used at cash dispensers (Bankomat) which are available all over the city.

Shopping

Typical shopping hours are Monday to Friday 9:00 am - 6:00 pm and Saturday 10:00 am - 1:00 pm

(5:00 pm). Apart from some tobacconists and small supermarkets at petrol stations and at the main railway stations, shops are closed on Sundays.

Luxury shops with an elegant clientele can be found in the pedestrian zone of the Graben and of Kärntnerstraße (underground U1, U3 / station Stephansplatz). Street entertainers and outdoor cafe's contribute to the special atmosphere of this area.

A well-known shopping area is Mariahilferstraße (underground U3 / station Neubaugasse).

More information can be found at: <http://www.austropa-interconvention.at/congress/info>



THE VENUE: HOFBURG IMPERIAL PALACE

The Hofburg Congress Center occupies a unique position among the congress centers of the world. The Hofburg Palace complex was built between the 13th and 20th century. The different wings of the former imperial residence portray the architectural periods of, Renaissance, and Baroque up to Classicism. Until 1918 the Hofburg Palace was the seat of the Habsburg dynasty. The conference will be held today in the same hall where the Emperor held his audiences, gala dinners and royal balls, or where Empress Maria Theresia was baptized on May 15, 1717. Since 1958 the Hofburg Congress Center has been situated in parts of the Old Castle, New Castle and the Leopold Wing. The take-over of part of the Hofburg complex was a new starting point from which to carry on the continuity of this historic building.

REGISTRATION

Those wishing to attend the congress are kindly requested to complete the Online Registration Form accessible via the congress homepage <http://www.ifso2015.com>.

After the successful process of your data, you will receive an automatically generated e-mail confirmation.

Accommodations for participants will be guaranteed until July 26, 2015. After this date registration is still possible, but availability of some accommodation facilities cannot be guaranteed.

Registration fees

	Before June 11, 2015	Between June 11, 2015 and August	Onsite Fee
Delegate – IFSO Member	€ 475	€ 515	€ 600
Delegate – IFSO Member	€ 475	€ 515	€ 600
+ International Bariatric Club (IBC) *	€ 50	€ 65	€ 70
+ EASO-Symposium *	€ 100	€ 110	€ 130
Delegate -- Allied Health **	€ 210	€ 230	€ 300
Delegate – Non Member (Physician)	€ 550	€ 580	€ 650
Resident / Fellow **	€ 275	€ 290	€ 310
Student **	€ 155	€ 200	€ 225
Animal Lab (Anastomosis and SILS)	€ 1600	€ 1800	€ 2000
Animal Lab (Anastomosis and Haemostasiology)	€ 1600	€ 1800	€ 2000
Post-Graduate Course *	€ 180	€ 210	€ 250
IFSO Congress Dinner (Viennese Ball)	€ 130	€130	€ 150

* Available only with full IFSO registration, additional CME credits

** Certificate/ID

Participant and student registration includes:

- admission to the **scientific sessions and exhibitions**
- **conference kit** (final program, book of abstracts, etc.)
- **coffee/tea, light lunch** during the official breaks
- **Welcome Reception** on August 26

PRE-CONGRESS AND INSTITUTIONAL MEETINGS

BOARD OF TRUSTEES MEETING

Date : Tuesday, August 25
Place : Hotel Steigenberger
Meeting room : Torberg
Time : 08:00 – 09:30

EXECUTIVE BOARD MEETING

Date : Tuesday, August 25
Place : Hotel Steigenberger
Meeting room : Torberg
Time : 09:30 – 13:30

GENERAL COUNCIL MEETING

Date : Tuesday, August 25
Place : Hotel Steigenberger
Meeting room : Torberg / Kafka
Time : 14:30 – 17:30

GENERAL COUNCIL DINNER

Date : Tuesday, August 25
Place : Museum of Natural History
Time : 19:30 – 23:30

EDITORIAL BOARD OF *OBESITY SURGERY*

Date : Wednesday, August 26
Place : Hofburg Palace
Meeting room : Hospitality Suite
Time : 14.00 – 16.00

GENERAL COUNCIL MEETING OF THE EUROPEAN CHAPTER

Date : Thursday, August 27
Place : Hofburg Palace
Meeting room : Hospitality Suite
Time : 12.00 – 14.00

POST-GRADUATE COURSES**(Educational Courses)****Hofburg Imperial Palace**

Please note that the preliminary programmes of the Courses are subject to changes

ONE ANASTOMOSIS GASTRIC BYPASS (OAGB)

Wednesday, August 26, 8:00-15:00

Course Directors and Moderators: Deitel M. (Canada), Prager G. (Austria), Chevallier JM. (France), Kular KS. (India), Chowbey P. (India)

8:00 Welcome: Why the OAGB/MGB is a good operation – Chowbey P. (Past-President of IFSO)

8:10 History and Rationale of the “Rutledge Operation”, and its names – Deitel M. (Founding & Honorary Life Member of IFSO)

STANDARD Procedure: Moderator – Kular KS.

8:15 Video – Technique of MGB (from an 11-year personal series of >1,500 MGBs: data & long-term outcome) – Peraglie C. (USA)

8:35 Video – Step by step technique of OAGB/MGB – Tantia O. (India)

8:50 Q&A on Technique of OAGB/MGB – Panel: Peraglie C., Tantia O., Peters A NC. (India), Musella M. (Italy)

8:55 Complications of the OAGB/MGB (based on personal results of >1,500 cases) – Hargroder D. (USA)

9:05 Marginal ulcer after OAGB/MGB – Prevention and Treatment (based on an experience with >1,200 MGB patients) – Kular KS

9:15 A technique used for prevention of internal hernias after OAGB/MGB – Himpens J. (Belgium)

9:25 Metabolic Bone Disease (including iPTH): 10-year comparison of restrictive surgery, RYGB and MGB/OAGB: Prevention – Lee WJ. (Taiwan)

9:35 1. Treatment of steatorrhea and hypoalbuminemia after OAGB/MGB – 2. Revision to OAGB/MGB after primary restrictive operations. Apers J. (Belgium)

9:45 Panel discussion, Q&A – Lee WJ., Hargroder D., Jammu GS(India), Apers J., Ribeiro R. (Portugal), Forrig A. (Egypt): Management of hiatal hernia, *H. pylori*, post-op supplements, iron deficiency, excess weight loss with hypoalbuminemia, reversal or shorter limb revision, bile reflux.

9:55 Quality of life 5 years after OAGB/MGB– Chevallier JM.

10:03 OAGB/MGB in the super-obese –Peters A NC. (India)

10:11 Experience with OAGB/MGB in Italy– De Luca M. (Italy)

10:20 Survey of bariatric surgery in India – tailored bypass length, ease of reversal/revision, not obstructive so patients can eat healthy diet (high satisfaction score), fear of reflux and malnutrition – Prasad A. (India)

10:30 *Coffee Break – 20 minutes*

10:50 Is there any evidence for increased threat of cancer after MGB? (plus discussion of CA after other bariatric operations) – Deitel M.

ANTIREFLUX TECHNIQUE OF OAGB: Moderator – Prager G. (Austria)

11:00 Video – Technique of the Garciacaballero OAGB – Garciacaballero M. (Spain)

11:15 Tailored one-anastomosis gastric bypass: technical details and management of complications – revision surgery

for OAGB with antireflux mechanism – Garciacaballero M.

11:25 Changes in body composition in patients with BMI 23-50 after Tailored OAGB – influence of diabetes and metabolic syndrome – Garciacaballero M.

11:35 Q&A on Garciacaballero method – Garciacaballero M.

11:45 Hypoglycemia: is there a difference between RYGB and OAGB? – Prager G.

11:55 ANTIREFLUX OAGB (Carbajo method): 13-year results with >2,800 patients. Comparative results of OAGB, RYGB, gastric banding and sleeve gastrectomy – Carbajo MA (Spain)

12:10 OAGB as a revision for other bariatric operations – Carbajo MA., Luque de Leon E. (Mexico), Flores M. (Mexico).

12:20 The effect of OAGB on the diseases of the metabolic syndrome –Fonseca G. O. (Mexico)

12:30–13:15 *Lunch Break*

RESOLUTION OF CO-MORBIDITIES: Moderator – Chowbey Pradeep

13:15 Efficacy of OAGB/MGB in type 2 diabetes resolution and in other co-morbidities – Musella M., Milone M. (Italy)

13:25 Long-term comparison of OAGB/MGB and RYGB (>10 years) and LSG – weight loss, complications, resolution of diabetes – Lee WJ.

13:35 An audit comparing LSG, RYGB and OAGB/MGB – Jammu GS.

13:45 Greater weight loss with the omega-loop bypass compared to the RYGB: a comparative study – Maud R. (France)

TECHNIQUES & EFFECTS: Moderator - Chevallier JM.

13:55 The mechanism of the MGB and why weight loss is sustained – Also, Comparison of MGB and sleeve gastrectomy – Kular KS.

14:05 Video – Revision surgery after OAGB/MGB – Chevallier JM.

14:20 Ileal Food Diversion: a major modification of OAGB/MGB – results compared to BPD – Tacchino R. and Greco F. (Italy)

14:30 Robotic method of OAGB/MGB – Prasad A.

14:40 Video – Robotic Technique of MGB with totally sutured anastomosis – Bhandari M.(India)

14:50 Technical comparison of two procedures (sleeve to OAGB/MGB or SADI) – Prasad A.

15:00 Adjourn

WRITING AND PUBLISHING A RESEARCH - ARTICLE OF EXCELLENCE (AOE)

Wednesday August 26, 8:00 – 15:45

Course Director: Buchwald Jane N. (USA)

Overview

The concept of the “Article of Excellence,” or “AOE,” is based on the Center of Excellence (COE) initiative. The AOE Course provides comprehensive didactic training in the development of science’s central document. The logical construction of each article section is taught, from clarification of the research question through electronic literature review, development of the study design and protocol, and appropriate reporting and interpretation of results. The processes involved in graphics

assembly, referencing, and abstract preparation are detailed, and careful attention is paid to the ethics of authorship, funding disclosure, and successful peer-review interaction. Authors learn to navigate and greatly accelerate article preparation and publication using the AOE RoadMap and Statistics Selector.

Audience

This course is designed for those involved in medical and basic science research. The course level is appropriate for participants in the early stages of a research career, as well as for the more experienced investigator seeking to refine his or her knowledge of the peer-reviewed research article genre.

Objectives

On activity completion, participants should be able to:

- Define the function, essential content, and development workflow of all article sections (i.e., Title, Abstract, Introduction, Methods, Results, Discussion, References)
- Clarify the testability of the research question in literature review
- Apply appropriate study design to the research process and article development
- Cite the statistical evaluation points vital to article preparation
- Distinguish between reporting and interpreting results
- Employ key editing techniques to achieve article precision and completeness
- Apply International Committee of Medical Journal Editors (ICMJE) *Uniform Requirements* and target journal guidelines for style and disclosure of authors and funding
- Apply the 10 AOE quality standards
- Successfully manage the article peer-review process

Agenda

Time	Topic
08:00	Welcome
08:05	Why Write and Publish an Article of Excellence?
08:15	Limiting Bias: Modern Scientific Method
08:30	Aerial View of the Research Writing Process: The AOE RoadMap
08:40	Introduction: Function, Essential Content, Workflow
08:45	Introduction: Defining the Research Question in Scientific Context
09:05	Introduction: Electronic Literature Search, Journal Selection
09:30	Methods: Function, Essential Content, Workflow
09:35	Methods: Experimental and Observational Study Designs
10:00 - 10:30	<i>Coffee Break</i>
10:30	Methods: Selecting a Study Design
10:45	Methods: Five Key Interactions with the Statistician
11:00	Results: Function, Essential Content, Workflow
11:05	Results: Reporting Descriptive and Inferential Statistics
11:40	Questions & Discussion
12:00 – 13:00	<i>Lunch Break</i>
13:00	Results: Guidelines for Constructing Tables and Figures
13:10	Discussion: Function, Essential Content, Workflow

- 13:15 Discussion: Interpreting Results, Answering the Research Question
- 13:30 Discussion: Limitations and Conclusions
- 13:40 References: Anchoring the Study
- 13:50 Abstract and Title: Critical Synopses
- 14:00 Macro and Micro Editing and the Quality Audit
- 14:15 Research Writing Teams
- 14:25 – 14:40 *Coffee Break*
- 14:40 Ethics of Authorship and Funding Disclosure
- 14:55 Manuscript Submission
- 15:05 Succeeding in the Peer-Review Response Process
- 15:15 Principles of Scholarly Research Writing
- 15:20 The International Literature and Individual Researcher
- 15:30 – 15:45 *Questions & Adjourn*

BARIATRIC / METABOLIC SURGERY COMPLICATION MANAGEMENT

Wednesday August 26, 8:00-15:00

Course Directors: Buchwald H. (USA), Nimeri A., MD (UAE)

08:00 Welcome and Introduction by Course Directors

Session I: How to avoid complications in bariatric/metabolic surgery

Moderators: Shikora S. (USA), Nimeri A. (UAE)

08:10 Preoperative preparation of the new patient. Shikora S. (USA)

08:20 Preoperative preparation of the patient for revisional surgery. Cohen R. (Brazil)

08:30 Preoperative preparation of the patient with an acute complication. Torres A. (Spain)

08:40 Postoperative complication can be prevented intraoperatively. Buchwald H. (USA)

08:50 Panel discussion

Session II: Management of technical complications and problems in bariatric/metabolic surgery. Moderators: Weiner R. (Germany), Angrisani L. (Italy), Bukhari K. (KSA)

09:10 Management of leaks. Rosenthal R. (USA)

09:20 Management algorithm for post sleeve gastrectomy leak. Nimeri A. (UAE)

09:30 Management of bleeding. Miller K. (Austria)

09:40 Management of stenoses. Weiner R. (Germany)

09:50 Management of bowel obstruction, internal hernias. Angrisani L. (Italy)

10:00 Management of anastomotic and gastric remnant ulcers. Melissas J. (Greece)

10:10 Management of gallstones and CBD stones. Agrawal S. (England)

10:20 Management of fistulas. Fobi MAL (USA)

10:30 Panel discussion

10:50 *Coffee & Refreshment Break*

Session III: Management of Metabolic Complications

Moderators: H. Buchwald (USA), W. Pories (USA), N. Scopinaro (Italy)

11:10 Post gastric bypass hypoglycemia. Pories W. (USA)

11:20 Undiagnosed abdominal pain syndrome. Fiennes A. (England)

11:30 Bile reflux gastritis after Omega loop gastric bypass. Dixon J. (Australia)

11:40 GERD after sleeve gastrectomy. Bukhari K. (KSA)

11:50 Postoperative malnutrition. Scopinaro N. (Italy)

12:00 Postoperative diet and supplements. Badiuddin F. (UAE)

12:10 Panel discussion

12:30 *Lunch Break*

Session IV: Management of Weight Recidivism After Bariatric/Metabolic Surgery

Moderators: R. Rosenthal (USA), M. Lakdawala (India), N. Zundel (USA)

13:30 Selection of patients for revisional surgery. Zundel N. (USA)

13:40 Management of failed gastric banding. Lakdawala M. (India)

13:50 Management of failed vertical banded gastroplasty and gastric imbrication. Fried M. (Czech Republic)

- 14:00 Management of failed gastric bypass and Omega bypass. Gawdat K. (Egypt)
- 14:10 Management of failed sleeve gastrectomy. Gagner M. (Canada)
- 14: 20 Management of failed biliopancreatic diversion/duodenal switch. Baltasar A (Spain)
- 14:30 Special Lecture: Minimizing readmissions: The ACS DROP Program. Morton J. (USA)
- 14:40 Panel discussion

- 15:00 Closing remarks by the Course Directors

BARIATRIC / METABOLIC GASTRIC PPLICATION

Wednesday, August 26, 08:30 – 15:30

Course Directors and Moderators: Fried M. (Czech Rep.), Copaescu C. (Romania), Dolezalova K. (Czech Rep.)

Tentative Faculty: Brethauer S. (USA), Rogula T. (USA), Karmali S. (Canada), Galvao M. / Ramos A. (Brazil)

08:30 Introduction of the Course, Fried M.

Gastric plication history, WW literature review, Important things to consider before starting gastric plication, S. Brethauer (USA) / T. Rogula (USA)

Tips and tricks - operation technique - Gastric plication complications prevention and management Dolezalova K. (Czech R.)

Gastric plication results from high volume Center in Mexico - lessons learned Lagardere AO. (Mexico)

10:00 *Coffee Break*

10:30 Metabolic effects, hormonal/incretin changes after gastric plication, Gastric plication as a conversion procedure (banding to plication, sleeve to plication, re-plication) Fried M. (Czech R.)

Gastric plication - Long-term results, Talebpour A. (Iran)

11:00 *Lunch Break*

12:30 When to revise and/or convert a gastric plication, and with which procedure? Copaescu (Romania) C.

Canadian experience with gastric plication – results, Karmali S. (Canada)

13:30 *Coffee Break*

15:00 Endoluminal plication / bariatric procedures, Galvao M. / A. Ramos (Brazil)

15:30 Round table discussion and wrap-up: all the speakers

HEMOSTASIS, STAPLING AND SUTURING

Wednesday, August 26, 9:00 – 14:00

Workshop Directors: Beckerhinn P. (Austria), Higa K. (USA)

Tutor: Jonas P. (Austria)

Course Overview and Targets:

The “Hemostasis and Stapling” Workshop will provide trainees with a hands-on possibility to experience different methods of hemostasis on one hand and performing stapled resections and anastomoses on living animal tissue in the pig lab on the other.

Course objectives

1. Preparation
Dissection of the omentum using the Harmonic Scalpel
2. Stapling of anastomoses
Experience the handling of linear stapling devices by performing resections of the stomach as well as linear anastomoses between small bowel segments
3. Suturing
Closing the enterostomy by performing laproscopic stitches
Hand sewn anastomotic technique
4. Hemostasis
Bleedings of liver and spleen will be managed using the different hemostatic devices

Online Registration mandatory: www.IFSO.com

Program:

- 7:45 Meeting for transfer to Baxter (Orth/Donau)
- 8:45 Arrival at Baxter Animal Lab
- 9:00 Introduction to the pig anatomy (Labahn D., Facility Manager Baxter)
- 9:15 Product information (Hemopatch, FloSeal, Peristrip, Duplo MIS) supported by Baxter (Koller K., Sales Manager, BioSurgery)
- 9:30 Product information stapling devices (supported by Ethicon)
- 10:00 Training in the Animal lab
- 14:00 Closing remarks and hand-out of certificates

Snacks and drinks will be provided during training breaks

BARIATRIC ENDOSCOPY

Wednesday, August 26, 07:30 – 18:30

This course will allow participants to use basic and advanced endoscopic tools that are critical to performing diagnostic and interventional endoscopy in bariatric patients.

Course Directors and Moderators: Galvao M., Gastro Obeso Center Sao Paulo (Brazil)
Zundel N., Florida International University (USA)

Tentative Faculty: Abu Dayyeh B. – USA, Josemberg Campos – Brazil, Costamagna G., Italy, Dib R., Brazil, Escalona A. – Chile, Greco E., Brazil, Goustot JC. – USA, Higa K. – USA, Lopez-Nava G. – Spain, Caetano Marchesini J. – Brazil, Pena N. – Dominican Republic, Peretta S. – France, Ramos A. – Brazil, Turro R. – Spain, Stier C. – Germany, Miller K. – Austria, Pujol J. – Spain

Background:

Bariatric Endoscopy (BE) is a neologism meaning a new term created to define the interface of advanced therapeutic endoscopy with Bariatric Surgery (BS). Mainly, its interface deals with treating bariatric surgery complications and primary obesity itself even revising secondary obesity (post-op weight loss failure or post-op weight regain). The interest about BE among bariatric surgeons and gastroenterologists/endoscopists are growing fast as training and information on this matter is truly needed since training opportunities are really scarce. The IFSO congress by means of an interactive post-grad course/workshop with live transmissions of cases performed around the world offers an intensive and immersive experience together with didactic lessons exposing the attendees to the most relevant information on this new field.

BE for surgical complications: Surgical treatment of obesity had been growing exponentially on last years, allowing better weight and comorbidities control when compared with clinical treatment. When surgical complications are evaluated, traditional surgical approach with reoperations and revisions on bariatric surgery seems to be associated with some sort of complication and mortality rates so endoscopic endolumenal approach is currently gaining ground on treating those complications due to its less invasive nature avoiding extra damage to abdominal wall. This is considered a new and unknown field by most endoscopists even if they are experts due to the fact the BS complications behave differently from surgical complications in lean patients. Also the literature about it is truly scarce and lacks of clinical guidelines about this growing matter.

BE as obesity treatment: Traditional clinical treatment of obesity is prone to fail on obese patients and besides BS is a very efficient treatment, just few surgical candidates (< 2%) reach it. So this leaves enough room to less invasive ways to treat obesity. Traditionally BE treats obesity with space occupying temporary devices like Intra-gastric balloons. Recently BE it is evolving into more sophisticated and may more durable devices and ways to treat obesity by mimicking BS restrictive procedures like bands and gastropasty with endoscopic stapling and suturing, even reaching hard to imagine boundaries like internal bowel diversion thus expanding BE to reach endoscopic treatment of Type 2 Diabetes possible.

BE as a treatment for post-op BS weight regain or weight loss failure: BS is a known safe and effective way to treat morbid obese patients on long term but as obesity is such a difficult disease to treat, failures can and will happens. Specifically on Roux-and-Y Gastric Bypass (RYGB) weight loss failure rates can goes as up to 20% and more on long-term follow-up. When failure happens due to the loss of expected surgical anatomy like in gastric pouch enlargement or dilation, loss of restriction external ring or gastrojejunostomy enlargement, a revisional surgical procedure can correct it putting the patient on track again but the cost-benefit in terms of severe and possible complications most of the times postpone it, even making experienced bariatric surgeon think twice in jumping on a surgical revision. To cover this gap, endoscopic RYGB endoscopic revision is being developed and is growing with devices approved for clinical use to wherever create folds and bumps or perform endoscopic suturing. Besides endoscopic RYGB revision efficacy and durability still needs long-terms results, its safety, initial efficacy and possibility of being redone makes it really palatable.

Workshop / course outlines:

To offer a comprehensive coverage of Bariatric Endoscopy and its interfaces by means of broadcasted live procedures and didactic lessons given by worldwide experts on this field integrating the surgical procedure anatomy, surgical approach and therapeutic endoscopic options thus given the attendee a multi-dimensional" comprehension of this complex matter. (1 full day)

Tentative program

7:30 – 08:00 Welcome and accommodation

BE for surgical complications module

08:00 – 08:15 Course introduction and highlights
Zundel N. and Galvao Neto M.

08:15 – 08:30 BE overview
Bariatric endoscopy anatomy – Surgical X endoscopic perspective
Galvao Neto M.

Gastric Band BE

08:30 – 08:45 Surgical treatment of gastric band complications. Emphasis on band erosion, Zundel N.

08:45 – 09:00 Endoscopic treatment of band erosion and the interface with its other complications – technical aspects and results, Galvao Neto M.

09:00 – 09:10 Interaction / Questions

RYGB BE

09:10– 09:30 Surgical treatment of RYGB complications, Ramos A.

09:30– 10:00 Endoscopic treatment of RYGB complications, Caetano Marchesini J.

10:00 – 10:10 Interaction / Questions

Sleeve Gastrectomy BE

10:10– 10:30 Sleeve Gastrectomy complications – “Surgeon perspective”, Szomstein S.

10:30– 11:00 Sleeve Gastrectomy complications - Endoscopic treatment, Campos J.

11:00 – 11:10 Interaction / Questions

11:10 – 11:30 *Coffee Break*

Bariatric endoscopy live procedures module - 11:30 – 15:00

Procedures broadcast to Montreal to view and interact–Lunch box during session

Endoscopic sleeve gastropasty - Abu Dayyeh B. and Goustot JC. – USA

RYGB endoscopic revision – Costamagna G., Italy

POSE procedure – Turró R., Barcelona, Spain

Endolumenal duodeno-Jejunal bypass – Pujol J., Spain

Intragastric Balloon implants and explant - Campos J., Greco E. and Dib R. bariatric Endoscopy team, Brazil

Endoscopic treatment of bariatric surgery complications – Gastric band and RYGB ring erosions, RYGB and sleeve gastrectomy leaks and stenosis - Campos J., Grecco E. and Dib R. bariatric Endoscopy team, Brazil

BE as obesity treatment and BS on weight loss failure module – 15:00 to 18:00h

15:00 – 16:10 Endoscopy treatment of obesity and metabolic comorbidities

15:00 – 15:15 What to expect from BE as a primary treatment option for obesity. Present and future perspectives, Peretta S.

15:15 – 15:30 Intragastric balloons as space occupying devices. Overview and results, Lopez-Nava G.

- 15:30 – 15:45 Endoscopic endolumenal gastroplasty, Pena N.
- 15:45 – 16:00 Endoscopic endolumenal fundus gastroplasty, technical issues, Miller K.
- 16:00 – 16:15 Endoscopic endolumenal bowel diversions, Escalona A.
- 16:15 – 16:30 Endoscopic endolumenal tissue remodelling, Galvao Neto, M.
- 16:30 – 16:45 Evidence base analysis of Endoscopic treatment of obesity and diabetes
Stier C. – Germany
- 16:45 – 17:00 Interaction / Questions

Endoscopy treatment on weight loss failure post bariatric surgery

- 17:00 – 17:15 Defining post-op weight loss failure. Higa K., USA
- 17:15 – 17:30 RYGB endoscopic revisions besides endoscopic suturing, Pena N.
- 17:30 – 17:45h - RYGB endoscopic revision with endolumenal suturing, Galvao Neto M.
- 17:45 – 18:00 - Interaction / Questions

INTERNATIONAL BARIATRIC CLUB

Wednesday, August 26, 15:00 – 18:30

Symposium Director: Khwaja H. (Phoenix Health, United Kingdom)

Symposium Co-Director: Tomasz Rogula T. (Cleveland Clinic, United States), Ortiz A. (Obesity Control Center, Mexico), Deitel M. (Toronto, Canada), Borg CM. (London, United Kingdom), Neto MG. (Gastro Obeso Center, Brazil)

15:00 – 15:05 Welcome: Khwaja H. (UK), Rogula T. (USA)

KEY NOTE LECTURES

Chair: Deitel M. (Canada)

15:10 – 15:20 Mental Training for the Bariatric Surgeon Miller K. (Austria)

15:25 – 15:35 Bariatric Surgery in Children – is it justified? Alqahtani A. (Saudi Arabia)

15:40 – 15:50 IBC Hot Topic – From Virtual to Live, Neto MG. (Brazil)

DEBATE #1 (8 minutes each, 3 minutes rebuttal)

Chair: Manoel Galvao Neto (Brazil)

1555 – 1620 'A LONG LESSER CURVE BASED GASTRIC POUCH IN RYGB IS THE IDEAL POUCH'

Moderator: Prager G. (Austria), Weiner R. (Germany) vs Gagner M. (Canada)

1620 – 1630 QUESTIONS FROM AUDIENCE

DEBATE #2 (8 minutes each, 3 minutes rebuttal)

Chair: Borg CM. (United Kingdom)

16:35 – 17:00 'BARIATRIC/METABOLIC SURGERY WILL BE DEAD BY 2050'

Moderator: Himpens J. (Belgium), Schauer P. (USA) vs Le Roux C. (Ireland)

17:00 – 17:10 QUESTIONS FROM AUDIENCE

EXPERTS' FORUM

17:15 – 17:35 'ENDOLUMINAL THERAPIES RATHER THAN LAPAROSCOPIC REVISIONAL SURGERIES FOR WEIGHT RE-GAIN AFTER SLEEVE GASTRECTOMY AND GASTRIC BYPASS ARE THE FUTURE?'

LEADER: ORTIZ A. (MEXICO)

Campos J. (Brazil), Cohen R. (Brazil), Eid G. (USA), Escalona A. (Chile), Fobi M. (USA),

Gagner M. (Canada), Galvao Neto M. (Brazil), Kerrigan D. (UK), Kroh M. (USA), Morton J. (USA), Nahmias N. (USA), Ramos A. (Brazil), Weiner R. (Germany)

17:40 – 18:00 VIDEO SESSION: DISASTERS IN THE OR - WHAT WOULD YOU DO?

LEADER: SCOTT SHIKORA (USA)

Ahmed A. (UK), Angrisani L. (Italy), Bashah M. (Qatar), Chevallier JM. (France), Fedenko V. (Russia), Fried M. (Czech), Javed S. (UK), Kayyal Y. (UAE), Ponce J. (USA), Schauer P. (USA), Torres A. (Spain), Welbourn R. (UK), Zundel N. (USA)

1800 CLOSING REMARKS - Khwaja H.(UK)

KEY ISSUES IN OBESITY PERI-OPERATIVE CARE

Friday, August 28, 08:00 – 18:50

Course Directors & Moderators:

Margarson MP (UK)

de Baerdermaeker L (B)

Tentative Faculty:

Brodsky J (USA)

Godoroja D (Romania)

Jones SB (USA)

Kabon B (A)

Mulier J (B)

Nightingale C (UK)

Sinha A (USA)

Others TWO (Austria)

Course Overview and Target Audience

This course will be delivered by experts in Bariatric anaesthesia to provide an update of the key issues in the peri-operative management of the Morbidly Obese patient.

It will address the major co-morbidities affecting this population, including the impact of the metabolic syndrome and the latest understanding of sleep apnoea and its relevance and impact on the peri-operative course. It will discuss cardiovascular and respiratory pathophysiology relevant to the morbidly obese then cover the fundamentals of drug dosing, airway challenges and finish by updating on current best practices in analgesia, nausea prevention, thromboprophylaxis and post-operative levels of care.

The course is based on the Bariatric Anaesthesia Revalidation course recognized by the UK Royal College of Anaesthetists and by the UK Society for Obesity and Bariatric Anaesthesia, as the knowledge base for certification in Bariatric Anaesthesia.

The target audience will be consultants and senior trainees who work with morbidly obese patients.

The morning sessions will be applicable to surgeons and all clinicians involved in pre-operative work up of patients undergoing bariatric surgery, the afternoon sessions will be aimed at those delivering anaesthesia and post-op care.

Discussions will be interactive to address practical questions.

The day will consist of five hours of lectures and one hour of discussion / feedback.

Course Objectives

Upon completion of this activity, participants should be able to:

- Describe the key pathological processes associated with significant obesity and understand the relevance of these conditions to the peri-operative course of patients undergoing general anaesthesia and surgery. Specifically they should recognize the impact of the pattern of fat distribution and the presence of the metabolic syndrome as major risk factors for peri-operative morbidity.
- Describe the screening, investigation and management of sleep apnoea and other obesity-related cardio-respiratory diseases.
- Describe principles of drug dosing regimens and understand body weight scalars used in obese patients. Know the benefits and contra-indications of multi-modal analgesia adjuncts and enhanced recovery strategies. Know the most appropriate anaesthetic agents and techniques to use in these patients
- Recognize the high-risk patient and appropriately stratify resources.
- Recognize the patient at high risk of thrombo-embolic events and be able to balance the risks and benefits of management strategies.
- Recognize and describe airway assessment and management strategies in the morbidly obese.

This course introduces and includes the theoretical aspects of the advanced airway workshop which will follow on the next day.

Agenda

Time	Topic	Speaker(s)
8:00am	Welcome & Introduction	
Session 1a: Introduction and Background		
8:05am	Anaesthetic disasters and obesity: Why we run this course..	
8:15am	Epidemiology and Anthropology of Obesity	
8:30am	BMI, Fat Distribution & Relevance to Drug Dosing	
8:40am	Inflammation & Metabolic Syndrome	
8:50am	Discussion	50 + 10 mins
Session 1b: The Co-morbidities		
9:00am	Cardiovascular effects of Obesity	
9:15am	Respiratory effects of Obesity	
9:30am	Sleep Apnoea: Pathophysiology and Mechanisms	
9:45am	Sleep Apnoea: Screening and Management	
10:00am	Assessment of Cardiopulmonary Reserve	
10:10am	The role of the MDT - Risk-benefit judgements	
10:20am	Discussion then Break	80 + 10 mins

[Presidential Address Session in Main Hall]

Session 2a: Airway Issues in the Obese

14:00	Reflux and the RSI myth	
14:15	Airway management to reduce risk	
14:30	Videolaryngoscopy and advanced airway techniques	
14:45	Discussion 1	45 + 10 mins
14:55	Ultrasonography in airway decision-making	
15:10	Pulmonary mechanics and ventilation in the obese	
15:25	Discussion 2	30 + 5 mins

Session 3a: Intra-operative Care

16:00	The Pneumoperitoneum	
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16:15	Analgesia & Opioid-sparing strategies	
16:30	The Ideal Anaesthetic techniques	
16:45	Discussion	45 + 10 mins

Session 4b: Post-operative Management

16:55	Thromboprophylaxis	
17:10	Post-op care: where ..?	
17:25	Surgery & the complications you must recognise	
17:40	Discussion	
17:50	Summing up & closing remarks: Adjourn	45 + 15 mins

DIFFICULT AIRWAY HANDS-ON WORKSHOP

Saturday, August 29, 08:30-12:30

Course Directors

Godoroja D (Romania)

Mulier J (B)

& Moderators:

Tentative Faculty:

de Baerdermaecker L (B) Brodsky J (USA)

Jones SB (USA)

Kabon B (A)

Margarson MP (UK)

Nightingale C (UK)

Others TWO (Austria)

Course Overview and Target Audience

The Difficult Airway Workshop will provide anaesthetists and interested surgeons with an overview of current concepts and devices available in the management of airway emergencies and review the algorithms and recognized pathways for dealing with complex airway management.

The session focus will be airway management in the obese patient

Course Objectives

Upon completion of this activity, participants will improve their practice in the following high risk areas:

1. Difficult airway and awake intubation

- When and how to perform a stress-free awake intubation using videolaryngoscopes or flexible fiberscopes
- Identify indications, contraindications, complications, and most appropriate techniques used in local anesthesia for the airway in anticipation of awake airway management

2. Videolaryngoscopy

- Review the different Videolaryngoscope devices and techniques and their role in Morbidly Obese Intubation in accordance with ASA and DAS algorithms

3. Flexible fiberscope use

- Identify the correct situations for the use of flexible fiberoptic or fiberoptic-like intubating scopes, including the indications, contraindications, and complications.
- Develop skills including insertion of fiberscopes into mannequins to recognize intraoral, intranasal, and tracheal anatomy.
- Identify indications, contraindications, complications, and appropriate techniques used in local anesthesia for the airway in anticipation of awake airway management.
- Develop a combination strategy for a failed airway technique. Use of a rigid laryngoscope to open a path for a fiberscope; use of a fiberscope in combination with supraglottic airways and intubating SGA, videolaryngoscopes, ETT exchange.

4. Safe extubation and the airway exchange catheter

- When and how to use airway exchange catheters and when not to use them..

5. Lung isolation

- learn and practice lung separation techniques in airway simulators

- left and right double lumen tube placement with confirmation of placement and troubleshooting
- use of bronchial blockers and options for lung separation in the face of difficult airways.

6. Ultrasonography for clinical decision-making and intervention in airway management.

- identify predictors for airway difficulty during induction of anaesthesia,
- evaluate the aspiration risk (stomach gastric content)
- identify the cricothyroid membrane and tracheal rings: confirm tracheal or oesophageal intubation
- perform nerve blocks for awake intubation
- emergency diagnosis of pneumothorax
- diagnosis lung consolidation, atelectasis, pleural effusion
- thoracocentesis under ultrasound guidance

7. Failed airway and open cricothyroidotomy

- Review the indications for emergency surgical airway management in relation to the recognised difficult airway algorithms.
- Describe the differences between elective tracheostomy and emergency surgical cricothyroidotomy in airway management.
- List and characterize the various forms of emergency surgical airway, including transtracheal jet ventilation and insertion of an endotracheal tube through a cricothyroidotomy;
- Identify and describe the anatomical landmarks for carrying out a needle or surgical cricothyroidotomy and perform these techniques on porcine models
- Understand difficulties and identify complications of these techniques in morbidly obese patients

Timings and Workstations

8:30 am: Welcome & Introduction: Case report of Obesity airway disaster to highlight dangers.

Overview of the techniques and workstations

Workstation One (30 min)

VIDEOLARYNGOSCOPY (C-MAC, Airtraq, King Vision)

RIGID OPTICAL LARYNGOSCOPY (BONFILS-Retromolar Intubation Endoscope)

Workstation Two (30 min)

SUPRAGLOTTIC DEVICES

Workstation Three (30 min)

FLEXIBLE FIBROPTIC INTUBATION

Flexible Intubation Video Endoscope

Upper airway local anaesthesia

Cook Airway Exchange Catheters

Workstation Four (30 min)

INTUBATION WITH FLEXIBLE FIBROPTIC ENDOSCOPE THROUGH SUPRAGLOTTIC DEVICES -Aintree Intubation Catheter, Arndt Airway Exchange Catheters, Airway exchangers)

Workstation Five (30 min)

LUNG ISOLATION TECHNIQUES

Double lumen tube

Bronchial blockers

Workstation Six (30 min)

WORKSHOP ON EMERGENCY SURGICAL AIRWAY MANAGEMENT USING A PIG TRACHEA MODEL

Needle Cricothyroidotomy (Melker Cricothyroidotomy Universal Emergency Set & Easy Cric)

Percutaneous Surgical Cricothyroidotomy

Workstation 7 (30 min)

UPPER AIRWAY AND LUNG ULTRASOUND

12:30 pm

Adjourn

WEDNESDAY, AUGUST 26

OPENING CEREMONY & WELCOME RECEPTION

EXHIBITION AREA: 18:30 – 20:00

WELCOME SPEECHES

- 19:00 Karl Miller, Congress President
- 19:05 Rudolf Weiner, President of IFSO



18:30 – 20:00 Welcome Reception will be served in the Exhibition Area

FRIDAY, AUGUST 28

FAREWELL DINNER (VIENNESE BALL)

VIENNA CITY HALL: 19:30 – Midnight

A dinner reception upon invitation of the Mayor and Governor of Vienna will be held at the Vienna City Hall.

Tonight will incorporate the sights, sounds and most importantly feel of the Viennese Ball all into one evening. But the night won't stop there! Push the tables aside, change your shoes and we'll break out the dance floor for an after party with live music spinning to finish off the evening in style - all of this accompanied by world class Austrian inspired food and flavors with of course, local Viennese wines. This is an evening not to be missed.



FRIDAY, AUGUST 28

PLENARY SESSION I: “STANDARD PROCEDURES” AND PRESIDENTIAL SESSION

FESTSAAL: 8:00 – 13:30

Chair: Kelvin Higa (USA)

Moderation: Aayed Alqahtani (Saudi Arabia), Martin Fried (Czech Republic)

- 08:00 **Key Note Lecture: Gastric Bypass "gold standard"**
 Kelvin Higa (USA)
Key Note Lecture: Gastric Sleeve, a perfect standard procedure for a high volume center Aayed
 Alqahtani (Saudi Arabia)
Key Note Lecture: Gastric Plication, an emerging procedure?
 Martin Fried (Czech Republic)
Key Note: Adjustable Gastric Banding – 20 years
 Christine Stroh (Germany)
- 09:00 **Scientific Paper Session**
- 10:30 *Coffee Break*
- 10:30 **Named Lectures & Presidential Address**
- Scopinaro Lecture: “The Healthy Obese?!” (20 min)**
 Introduction: Karl Miller (Austria) President of the Congress
 Speaker: Francis Finucane (UK)
- Presidential Address: Rudolf Weiner (Germany)**
 Introduction of the President of IFSO: Rudolf Weiner - Raul Rosenthal (USA)
 Introduction of the Incoming President of IFSO: Natan Zundel (USA) - Raul Rosenthal (USA)
 Recognition of the New Life Member - Rudolf Weiner (IFSO President)
- Mason Lecture: “IFSO Statement on indications for weight related metabolic surgery”**
 Introduction: Natan Zundel (USA) President elect of IFSO
 Speaker: Scott Shikora (USA)
- 12:30 *Lunch Break*
- 12:30 - 14:00 Major/Main Sponsor Lunch Sessions
 12:30 - 14:00 Gore Satellite Symposium - Garten Saal
 12:30 - 13:30 IFSO Committee Meetings

Preliminary Program at a Glance

ISFO 2015 - PROGRAM OVERVIEW

	Monday Aug. 24, 2015	Tuesday Aug. 25, 2015	Wednesday Aug. 26, 2015	Thursday Aug. 27, 2015	Friday Aug. 28, 2015	Saturday Aug. 29, 2015
08:00-10:00	IFSO Business Meetings Hotel Steigberger					
10:30-12:00	Faculty and Council Dinner (Invitation) Museum of Science and Industry					
12:00-13:00	Break	Break	Break	Break	Coffee Break	Coffee Break
13:00-14:30	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration
14:30-15:30	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration
15:30-16:30	Break	Break	Break	Break	Coffee Break	Coffee Break
16:30-18:00	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration
18:00-19:30	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration	Forum Post-graduate Course: Gastric Bypass with Live Demonstration
19:30-21:00	Welcome Reception 19:30-20:00 Foyer - Exhibition Rooms					
21:00	IFSO Rock the Congress					

SCIENTIFIC SESSIONS

TOPICS

- Adjustable Gastric Banding
- Anesthesia and Perioperative Setting
- Endoluminal, Mini Invasive and Reduced Port Procedures
- Endoscopic and Percutaneous Interventional Procedures
- Gastric Bypass Procedures
- Gastric Plication
- Gastric Stimulation and Nerval Blockade
- Integrated Health
- Young IFSO Session
- Low BMI Strategies
- Malabsorbptive Procedures
- Metabolic Disorders, Epidemiology, Physiology
- New (Non Standard) Surgical Techniques
- Obesity Treatments in Adolescents
- Radiological Interventions and Digital Diagnostic
- Sleeve Gastrectomy

ORAL PRESENTATIONS

O.003

SAVING THE GASTRIC BAND – MORE ART THAN SCIENCE?

Rabenstein, K.¹, Rabenstein, J.¹

¹ *St Leonards-on-Sea, East Sussex, United Kingdom*

Introduction: Laparoscopic adjustable gastric banding (LAGB) is at risk of becoming a victim of its own success: it no longer challenges experienced surgeons, and for long-term success depends primarily on aftercare which rarely involves the surgeon and suffers from the absence of universally agreed protocols, quality assurance mechanisms, and training pathways.

Objectives: Client satisfaction with services varies enormously while complications are not uncommon and may result in adverse publicity. Private sector practice has left many less affluent patients unsatisfied with suboptimal results, and those who have had their operation abroad struggle to access aftercare in the UK. A regrettable lack of understanding about how the band actually works and how to recognize and manage complications persists among bariatric patients, their general practitioners, and district general hospital staff.

Methods: In this way the LAGB has suffered serious reputational damage just as new permanent operations are coming to the fore. Yet today's LAGB is a technologically mature product comprising the cheapest, safest and only fully reversible bariatric operation as well as being a valuable add-on option for revision surgery - however it may not survive unless surgeons continue to support it while both quality and accessibility of aftercare improve.

Results: We see many LAGB patients who have been left unhappy with public or private aftercare. We discuss here medicopolitical and regulatory changes in bariatrics, persisting controversies in LAGB aftercare, address common pitfalls, and recommend the establishment of educational outreach programmes for patients and non-bariatric healthcare providers as well as certified training courses for bariatric aftercare providers.

O.016

INCIDENTAL FINDING OF GIST DURING OBESITY SURGERY

S. Chiappetta, S. Theodoridou, C. Stier, R.A. Weiner

Department of Bariatric and Metabolic Surgery, Sana Klinikum Offenbach, Offenbach am Main, Germany

Objective: Incidental gastrointestinal stromal tumors (GISTs) can be observed during obesity surgery and challenges the bariatric surgeon to perform bariatric procedure with optimal oncological resection. We hypothesized that complete resection of gastric GISTs during laparoscopic sleeve gastrectomy (LSG) and laparoscopic Roux- en-Y Gastric Bypass (LRYGB) result in low perioperative morbidity and effective long-term control of the disease.

Methods: From January 2010 to March 2014, 2603 patients underwent LSG and LRYGB. All cases with incidental GISTs found at time of laparoscopic exploration and confirmed by pathology were reviewed.

Results: 2603 patients underwent LSG (n = 892) and LRYGB (n = 1711) in the time between 01/2010 and 03/2014. 8 patients, mean age 54 years (range 46-70 years), underwent 7 LSG and 1 RYGB founding an incidental asymptomatic GIST during surgery (incidence 0.31%). Mean tumor size was 7.65mm (range 2.5 – 13mm) with the majority of the lesions located in the fundus of the stomach. Mean operative time was 57 minutes (range 45-74 minutes) and the mean length of hospitalization was 5.1 days (range 5-6 days). There were no major perioperative complications or mortalities. All lesions had negative resection margins. At a mean follow-up of 28 months all patients were disease free.

Conclusion: A laparoscopic approach to surgical resection of gastric GIST during obesity surgery is associated with low morbidity and normal hospitalization. The long-term disease-free survival of 100% in our study establishes laparoscopic wedge resection during LRYGB and LSG as safe and effective in treating gastric GISTs < 2cm.

O.021

PORTAL HYPERTENSION IS NOT AN ABSOLUTE CONTRAINDICATION TO BARIATRIC SURGERY

Samer Mattar¹, John Wennergren², Michael Burchett², Daniel McKenna², Jennifer Choir², Don Selzer²

¹ Oregon Health & Science University

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Introduction: It is predicted that NASH will become the most common indication for orthotopic liver transplantation (OLT). However, high BMI precludes many patients from receiving this life-saving operation, and portal hypertension (PTH) currently precludes many patients from receiving bariatric surgery due to the unacceptable high risk of exsanguination or postoperative death. Transjugular intrahepatic porto-systemic shunts (TIPS) have proven to be effective in reducing portal pressure, thereby reducing the operative risk of these patients.

Methods: The medical records of 4 patients were reviewed. All patients had NASH-related PTH and underwent bariatric surgery after TIPS placement.

Results: All 4 patients were male, with a mean age of 48 years (43-53), and a mean BMI of 52 (43-59). Mean Pre-TIPS port-systemic pressure gradient was 21 mmHg (18-27mmHg) while mean Post-TIPS gradient was reduced to 6mmHg (4-8mmHg). Three patients received sleeve gastrectomy and one patient had a gastric bypass. The mean time interval between TIPS placement and bariatric surgery was 16 months (4 – 36). There were no mortalities and postoperative complications. The mean EWL% was 53% (31% - 86%). Two patients received OLT after a mean time interval of 14 months. One patient's liver function improved and no longer needed OLT. The TIPS shunt thrombosed in one patient, however, his LFTs remained stable but he died of complications of small bowel obstruction.

Conclusion: Preoperative placement of TIPS appears to help optimize high risk patients with PTH and render them suitable for bariatric surgery and OLT, if still indicated after accomplishing weight loss.

O.037

2 YEARS EXPERIENCE OF LAPAROSCOPIC BANDED SLEEVE GASTRECTOMY USING GABP RING

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Background: Laparoscopic Sleeve Gastrectomy is being used as a bariatric procedure more frequently and is replacing adjustable gastric banding. But there is a fear that the remnant stomach may dilate over time and cause weight regain.

Methods: A prospective cohort study was performed between Sleeve Gastrectomy and Banded Sleeve Gastrectomy with 71 patients in each limb matched for sex, age, and initial body mass index during the same period. To evaluate Banded Sleeve Gastrectomy using a GaBP ring regarding its effectiveness and quality of life.

Results: All 142 patients tolerated the respective procedures well with no intra operative or post-operative complications. The weight loss compared between the banded and non-banded sleeve gastrectomy at the end of 1year (37.86 kgs / 31.15 kgs), 18 months (39.87 kgs /32.34 kgs) and two years (45.35kgs / 30.67 kgs) showed superior weight loss in the banded sleeve gastrectomy group. Eight patients had symptoms of gastro esophageal reflux in the banded group which subsequently improved. The two groups compared equally in respect to safety and patient satisfaction.

Conclusions: Banded Sleeve Gastrectomy is a safe procedure with good patient satisfaction. Initial results show better weight loss along with prevention of weight regain at 2yrs follow up.

O.041

CLINICAL TRIAL USING PREOPERATIVE ENTERAL GLUTAMINE AS IMMUNOMODULATOR ADJUVANT THERAPY IN PATIENTS WITH SEVERE OBESITY UNDERGOING LAPAROSCOPIC GASTRIC BYPASS

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Introduction: The use of metabolic agents, such as Glutamine, in preoperative period, can help in postoperative recovery; because the impact on intestinal perfusion and immune response. Until now, there are not previous researches with this population in the proposed scenario. The objective is to evaluate modulation from the immune response with enteral glutamine by the reduction of acute phase proteins and identification of Treg cells.

Methods: Comparative randomized blind clinical trial with 13 patients undergoing Laparoscopic Gastric Bypass from April 2014 to December 2014, in the Hospital Civil Fray Antonio Alcalde, Guadalajara, Jalisco, Mexico. Body Mass Index in both groups was >35 and <45 kg/m². Study group received enteral Glutamine 40g/day and Control Group Calcium Caseinate 40g/day; 5 days previous surgical intervention. Clinical evaluation and blood samples were obtained before oral intake, 1-hour previous surgical intervention and 48 hours after Laparoscopic Gastric ByPass.

Results: In our study, no difference was found in the clinical evaluation, Treg levels and almost all of the acute phase proteins. However, 48-Hours after Laparoscopic Gastric ByPass, C-Reactive Protein was lower in Study Group with 75.7±12.44 mg/dl compared with Control Group 131.47±40 mg/dl, p=0.009 CI95% (-93--17)

Conclusions: Preoperative enteral Glutamine can reach lower C-Reactive Protein levels, according to our study model. The present study has numerous limitations that must be addressed. Therefore, more studies are needed to confirm the results.

O.043 REVISION GASTRIC BYPASS TO LONG-LIMB GASTRIC BYPASS FOR INADEQUATE WEIGHT LOSS: A PERSONAL SERIES

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Background: The long-limb Roux-en-Y gastric bypass (LLRYGB) was introduced in 1987 (Torres & Oca) as a salvage procedure for failed or inadequate weight loss after standard gastric bypass, a problem becoming more prevalent. This employment of LLRYG has lacked extensive literature assessment.

Methods: We report a personal series of 53 consecutive RYGB revisions to LLRYGB: 44 females. LLRYGB consists of reformatting bowel continuity. Our common channel was 75-85 cm. Initial series patients had a single bowel division above the jejunojunostomy and translocation of the Roux limb inferiorly. Later patients, in order to enhance protein absorption, had a tri-resection of the previous jejunojunostomy and two anastomoses to restore jejunal continuity, an enteric limb over 250 cm, and translocation of the biliopancreatic limb inferiorly.

Results: Average pre-original RYGB weight (lbs): 329 (n=53); lowest post-original RYGB weight: 196 (n=52); weight pre-revision to LLRYGB: 286 (n=53); post revision weight at 1 year: 216 (n=35), 2 years 198 (n=23), 3 years 197 (n=14), 4 years 193 (n=13), and 5+ years 195 (n=15). Pre-revision BMI 47.2; BMI at 1, 2, 3, 4, and 5+ years: 35.9 (-24%), 33.2 (-30%), 32.8 (-31%), 32.4 (-31%), and 31.4 (-34%). Operative 30-day mortality zero; 2 late deaths unrelated to the procedure. 30-day complications: 8 (15.4%). Long-term nutritional problems: 26 out of 53 (49%); 23 placed on TPN, 14 revised back to standard RYGB.

Conclusion: Revision of a RYGB to LLRYGB for inadequate weight loss is successful with >30% BMI reduction maintained over 5 years, but fraught with nutritional complications.

O.044 IS REJECTION OF BARIATRIC SURGERY A RESULT OF A NEGATIVE ATTITUDE TOWARDS OBESE PATIENTS?

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Background: Kuwait was the only country in the world to impose a temporary ban on bariatric surgery in 2013. However bariatric surgery is strongly shown to be a very effective treatment for morbid obesity. It could be that the negative attitude in general towards obese subjects is what encouraged such measure. Therefore in this study we aimed to assess medical students' attitude towards the treatment of morbidly obese patients using a known validated questionnaire designed specifically for the purpose.

Methods: The NEW scale questionnaire was administered to senior medical students (6th and 7th year) at Kuwait University Faculty of Medicine (KUFM). Participation was confidential, not related to assessments, and not rewarded. The results were compared to the results by second and fourth year medical students at Wake forest School of Medicine (WFSM). We also added a question to determine the student acceptance of bariatric surgery.

Results: Ninety three students submitted filled questionnaires (52% participation rate). There were 29 male and 64 female students. On average the group scored 15.47±19.40, much lower than WFSM fourth year students, who scored 19.7±20.6, p=0.039. When compared by gender, the KUFM male students scored 18.33±19.15, lower than their female classmates, who scored 14.72±19.74. The difference, however, was not statistically significant, p-value = 0.423. Although not statistically significant, KUFM males scored lower than

WFSM males, 15.47±19.40 vs. 22.2±20.5, $p=0.304$. KUFM females scored significantly lower than WFSM females, 14.72±19.74 vs. 25.9±19.6, $p<0.001$. The NEW score correlated to the students' acceptance of the bariatric surgery, $r = 0.3$ ($p=0.004$).

Conclusion: Negative attitude towards obese patients may contribute to the rejection of bariatric surgery. In a country with one of the highest rates of obesity in the world this need to be addressed by proper education tools and curriculum.

O.049

A 8-YEARS RESULTS OF SLEEVE GASTRECTOMY

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Background: It is an evaluation of the efficacy and safety of Sleeve Gastrectomy (SG) at 8 years follow-up.

Methods: From May 2004 to November 2006, 64 patients underwent a SG. Percentage of EWL and EBL, as well as co-morbidities, gastroesophageal reflux disease (GERD), and complications were evaluated at 2, 5, and at 8 years.

Results: A complete record was obtained for 55 patients (85.9%) including 45 patients who only have had a SG and 10 who have had a second bariatric procedure (7 gastric bypasses, 3 re-SG). The mean %EWL of 55 patients was 58.4 at 2 years, 54.7 at 5 years, and 52.1 at 8 years; the mean %EBL was 63.1 at 2 years, 59.0 at 5 years, and 57.2 at 8 years. Three patients (5.5%) have had postoperative complications: 2 fistulas (3.7%), 1 hemorrhage (1.9%). The analysis of the subgroup of 45 patients who only have had a SG found a mean %EWL of 59.1 at 2 years, 53.6 at 5 years, and 50.3 at 8 years; the mean %EBL was 64.1 at 2 years, 57.2 at 5 years and 54.2 at 8 years. For these 45 patients we found a favorable evolution of comorbidities at 8 years follow-up: diabetes decreased of 53.9%; hypertension decreased of 47.1%; dyslipidemia decreased of 50%; SAS decreased of 68%. But GERD increased of 200%.

Conclusions: At 8 years post SG, weight loss and reduction of comorbidities were satisfying. The rate of complications was low but the frequency of GERD was increased.

O.052

INCIDENCE OF INTERNAL HERNIATION AFTER GASTRIC BYPASS SURGERY WITHOUT CLOSURE OF MESENTERIC SPACES

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Introduction: Reported incidence of internal herniation (IH) after gastric bypass (GB) surgery is 0.3-2.5%. There remains debate on the need for closure of mesenteric spaces in order to prevent dreadful complications. Aim of this study was to investigate the IH rate without mesenteric closure.

Methods: An antecolic antegastric GB was performed in all patients. The medical records of all patients selected for diagnostic laparoscopy in the period September 2011 to September 2014 were reviewed. Data on diagnostic tests, weight loss and follow-up were collected.

Results: From 2048 GB procedures an IH was suspected in 63 patients. Elective or acute laparoscopy or laparotomy ($n=2$) was performed in respectively 43 (68%) and 20 (32%) patients. True IH was found in 36 patients (16 acute, 20 elective) with an incidence of 1.8%. Median follow-up to IH was 14 months (range 0.2-78, S.D. 14.0), with a peak at 11-16 months (39%). Median weight loss was 38 kg (range 0-62, S.D. 14.9), with a peak at 27-42 kg (47%). Laboratory tests (lactate, bilirubin), abdominal x-ray or computed tomography was performed in respectively 28/36 (78%), 24/36 (67%) and 11/36 (31%) patients. Signs for IH were positive in 14% (lactate) and 8% (bilirubin), 21%, and 27% respectively.

Conclusions: The incidence of IH is not high without closure of the mesenteric spaces. A high index of suspicion remains the reason for laparoscopy, especially after approximately one year and weight loss of more than 30 kg.

O.059

MANAGEMENT ALGORITHM FOR LEAKS FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction: Leak after laparoscopic sleeve gastrectomy (LSG) is a serious complication. No clear algorithm has been described for management.

Methods: We reviewed our prospective database for all leaks after LSG treated at the Bariatric & Metabolic Institute (BMI) Abu Dhabi from 2010-2014. Our management algorithm is based on the timing of the LSG leak, nutritional status of the patient and the presence of stenosis or peritonitis. Acute leaks with or without peritonitis are treated by operatively or utilizing endoscopic stenting respectively. LSG leaks with stenosis not amenable to endoscopic stenting are treated with laparoscopic Roux en Y esophago-jejunostomy (LRYEJ).

Results: We performed 236 LSG without a leak, and 14 LSG leaks were referred to our unit. Mean age was 35.6 years, 50% of patients were Males. Mean BMI was 37 Kg/M². The patients presented on average 13.9 weeks after LSG. Enteral feeding was used as the

primary nutrition route in 85.5% of patients. Our management strategy was operative in 78.4% of patients (jejunostomy feeding in 57% and LRYEJ in 21.4% of patients), and conservative with or without stents in 21.6% of patients. Mean in hospital length of stay (LOS) was 5.6 weeks. Our re operation rate was 7%. There were no mortalities and one patient 7% developed pulmonary embolism. None of the patients treated returned with a leak or collection after a mean follow up of 23.6 month.

Conclusion: Treating leaks following LSG based on the timing of presentation, presence of stricture and malnutrition is safe and effective.

O.063 COMPARISON 2 YEAR FOLLOW UP RESULT OF SLEEVE GASTRECTOMY (SG) AND GASTRIC PPLICATION (PROSPECTIVE CLINICAL TRIAL)

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Laparoscopic gastric plication (LGP) is a new restrictive bariatric surgery with 14 years experience in the world. The aim of this prospective clinical trial study is to compare the 2 year follow up results of LGP and SG.

The including criteria was BMI>40 or >35 with major Comorbidity with normal psychological status, potential of life style change and age 18 to 65.

By “Sina obesity research center” (SORC) two groups of 35 patients blindly selected based on statistic points. Standard sleeve gastrectomy (guide No:32) and standard gastric placcation (guide No:32) performed by one surgeon.

2 year post operative follow up including complications, weight loss, change of comorbidities and late physiologic changes like anemia and calcium reserve of body recorded in all of 70 cases by SORC.

The mean age in LGP was 35 and in SG was 38. F/M ratio was 77%, 83% and BMI 44.7, 48.5 respectively.

BMI after 2 years was 29.3, 30.7 respectively. The common postoperative problem after both was nausea with the same ratio. Reoperation was 2 to 7 and major complication 1 to 3. Anemia 3 to 7 and vitamin D deficiency 0 to 1 under medical therapy. Gallstone after operation 3 to 4.

Co morbidities in both resolved in the same form. Hospital stay was 3 to 5 days.

Comparing the results of LGP and SG show the same weight loss result with lower complication and cost in LGP.

O.066 ASCERTAINING KNOWLEDGE OF CONTRACEPTIVE PRACTICES WITHIN BARIATRIC SURGICAL TEAMS

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Background: Over 80% of patients who present for bariatric surgery are female and of reproductive age (Welbourn et al, 2014). Current advice suggests patients should refrain from conceiving until at least a year after bariatric surgery (ACOG, 2009) because of unknown effects of rapid weight loss and potential nutrient deficiencies on mother and foetus. The provision of contraception education and provision is thus an important aspect of bariatric surgery. Current guidelines for contraception in the obese (UKMEC, 2009) are not relevant to bariatric patients, as contraceptive methods and efficacy can be affected by rapid weight loss and the malabsorptive effects of gastric bypass. The aim of this study was to understand knowledge levels and contraceptive practices to establish the current situation in bariatric clinics in the UK.

Methods: An on-line survey was sent out to all British Obesity and Metabolic Surgery Society (BOMSS) members who were emailed by BOMSS Specialty Managers on behalf of the research team. Potential respondents were given two weeks to complete the survey which aimed to understand current knowledge levels and existing contraceptive practices amongst the bariatric surgical teams in the UK.

Results: 64 BOMSS members completed the survey (16.7% response rate), with 97.3% stating the bariatric team should provide contraceptive advice, with nurses undertaking this task (84.1%). 79.4% discussed avoidance of pregnancy after surgery, but there was no consensus on timeframe. 56.5% of respondents were not confident discussing contraception, with an identified need for improved communication with contraceptive providers (82.8%) and further education needed (87.5%).

Conclusions: Bariatric surgical teams do not feel confident in discussing contraception with patients. There is a need for increased knowledge on contraception amongst bariatric surgical MDT's, and communication between bariatric teams and contraceptive providers. Further research is needed to address the current situation.

O.067 TOTALLY ROBOTIC GASTRIC BYPASS USING MODIFIED LONROTH TECHNIQUE

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Background: Robotic Bariatric Surgery is a good option for the super obese where laparoscopy demands challenging technical skills. Gastric bypass can be difficult due to inability of the robot to work in two quadrants at the same time. Lonroth technique of gastric bypass involves a totally supracolic surgery where all anastomosis are done in one quadrant only.

Methods: We have done 18 robotic gastric bypass surgeries using the modified Lonroth technique. The robot is docked above the head of the patient in the midline. Camera port is placed supra umbilically. Two ports are placed on the left side of the patient and one port on the right side of the patient. An assistant port is placed between the camera port and right sided robotic port for use of stapler. Gastric pouch is made first followed by the gastrojejunostomy that is a four layered sutured anastomosis. Jejunum jejunostomy is then performed followed by a leak test and then the jejunum is divided. A 75 cm biliopancreatic limb and a 150 cm alimentary limb is finally obtained. Mesenteric and Petersen's defects are then closed.

Results: All patients had a successful robotic procedure. Mean time taken in the first 5 cases was 130 minutes. This reduced to a mean of 95 minutes in the last five cases. There were no intraoperative or post operative complications.

Conclusions: While a hybrid technique of partly laparoscopic and partly robotic gastric bypass has been done at many centres, we feel using the modified Lonroth technique, a totally robotic gastric bypass surgery fully utilizes the potential of robotic bariatric surgery.

O.070 INTERNAL HERNIATION AFTER LAPAROSCOPIC ANTECOLIC ROUX-EN-Y GASTRIC BYPASS IN A DANISH NATIONWIDE REGISTRY

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Introduction: Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is the most common surgical treatment for morbid obesity in Denmark. Internal herniation (IH) is a major late complication after LRYGB due to persistent mesenteric defects. However, the incidence of IH is still not known in Denmark.

Objectives: The aim of this study was to describe the incidence of IH or IIH (intermittent internal herniation) after LRYGB in Denmark from 2006 to 2013.

Methods: We performed a retrospective review of patient data based on the Danish National Patients Registry. All patients operated with LRYGB were identified for the observation time from 2006 to 2011. During follow-up from January 2006 to May 2013 we registered all relevant abdominal operations performed subsequently. All operation and patient charts were scrutinized for possible cases of IH including cases of IIH. The findings were coded based on standardized definitions. Survival analysis is used.

Results: From 2006 to 2011, 12221 patients underwent a LRYGB.

383 (3.2%; 95% CI: 2.9-3.5) patients were later operated due to IH or IIH. The median time until the registered operation for IH/IIH occurred was 15 (0-67) months in a follow-up time with a median of 38 (0-87) months. 129 (32.8%) were operated the first year, 167 (42.5%) were operated the second year and 60 (15.3%) were operated the third year.

Conclusion: In 2006 to 2011 the mesenteric defects were not closed during the initial LRYGB operation in Denmark. The cumulative incidence of IH or IIH was 4% during a median follow-up time of 38 months.

O.075 IS THERE A UNIVERSAL ACCURATE IDEAL BODY WEIGHT MEASUREMENT?

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Background: Ideal body weight and weight loss are reported using various methods.

Methods: A study was performed over 2012–2013 to observe what measurements were used for body weight in the two bariatric surgical journals; their accuracy was inspected. Case reports were excluded.

Results: %EWL was used in 88 articles, BMI alone in 38, %EBMIL in 2, kg in 10, waist circumference in 4 and waist/height ratio in 3. A historical review found that EWL (based on ideal weight for longevity) was based on the 1979 18-yr Build Study of the Society of Actuaries, which was derived from 4.2 million mainly affluent white individuals from 25 insurance companies in USA and Canada, used for the Metropolitan Life tables of 1983. $\%EWL = (\text{preop wt} - \text{current wt} / \text{preop wt} - \text{ideal wt}) \times 100$. Metropolitan Life does not intend to perform another study. Furthermore, people are living longer. BMI was determined as kg/m² in men, but was actually kg/m^{1.5} in women. Normal BMI values are conveniently up to 25. $\%EBMIL = (\text{preop BMI} - \text{current BMI} / \text{preop BMI} - 25) \times 100$. However, for the Indo-Chinese population, hyperglycemia and heart problems start with BMI 22. Higher waist circumference (women >88, men >100) indicates risk of cardiac events, but varies with height, and in USA has increased over the past 15 yrs. No measure is without major criticism.

Conclusions: There is no current universal standard for ideal weights and follow-up weight.

O.081

LAPAROSCOPIC INSERTION OF MINIMIZER FOR THE TREATMENT OF FAILED ROUX-EN-Y GASTRIC BYPASS

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Background: Laparoscopic insertion of minimizer for the treatment of failed roux-en-y gastric bypass.

Methods: Laparoscopic Gastric Bypass is a Gold Standard Technique for the treatment of Morbid Obesity but associated with 15-20% failure rate.

Results: We report our experience at the American University of Beirut Medical Center of 20 cases of failed Gastric Bypass that was treated successfully with laparoscopic insertion of minimizer on top of gastric bypass with excellent weight loss and decrease in the incidence of dumping.

Conclusions: Laparoscopic insertion of minimizer can be safely used in failed roux-en-y Gastric Bypass failure.

O.087 NON-OPERATIVE MANAGEMENT OF STAPLE LINE LEAKS FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY WITHOUT THE USE OF ENDOSCOPIC STENTS

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Background: Staple line leak is the most dreaded complication following laparoscopic sleeve gastrectomy. Various treatment options include reoperation, endoscopic stenting and conservative measures. We present our approach to non-operative management of leaks without the use of endoscopic stents.

Methods: Out of 420 patients who underwent laparoscopic sleeve gastrectomy (LSG) at our centre from January 2008 to February 2015, five patients (1.2%) were diagnosed to have a leak from staple line. They were managed conservatively with image-guided drainage of intra-abdominal sepsis, intravenous antibiotics, proton pump inhibitors and feeding through naso-jejunal tube (NJ tube) inserted under fluoroscopic guidance.

Results: All the patients were hemodynamically stable at the time of diagnosis. 4 patients presented within 1 week (3, 4, 6, 7th post operative days) and one patient after 2 weeks of surgery. The presenting feature included fever and abdominal pain in 4 patients. In one patient, the leak was suspected due to turbid discharge from the drain. Patients were managed conservatively without use of stents. Leak healed completely in 4 patients (confirmed by gastrograffin study) within 4-6 weeks of diagnosis and got converted to a low-output gastrocutaneous fistula in one patient.

Conclusion: Conservative approach to management of acute and early staple line leak following LSG is successful in majority. It avoids reoperation and use of endoscopic stents with its associated problems and high cost.

O.089 IMPACT OF USE OF BIO-ABSORBABLE STAPLE LINE REINFORCEMENT ON OPERATIVE TIME AND BLEEDING IN SUPER-OBESE PATIENTS UNDERGOING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Although the impact of laparoscopic sleeve gastrectomy (LSG) on weight loss and resolution of co-morbidities is well known, there are certain key unresolved technical issues; one of the being about impact of staple line reinforcement (SLR) on the operative time and post-operative complications. Operative time can get prolonged as a result of controlling oozing/bleeding from the long staple line. The rate of post-operative complications including bleeding and leaks is higher in the super-obese group of patients. Use of thin strips made of bio-absorbable material during stapling has been shown to decrease bleeding and possibly leaks. However, the data regarding this is equivocal. In this pilot randomized study, we plan to study the impact of SLR using bio-absorbable strips on the operative time and bleeding in super-obese patients undergoing LSG.

Methods: 20 patients fulfilling the following inclusion criteria for bariatric surgery were randomized to two groups using computer generated numbers. Group A comprised of 10 patients who underwent LSG without the use of any staple line reinforcement (SLR). Group B will comprised of 10 patients in whom staple line was reinforced using bio-absorbable strips (Seamguard) during stapling. Intra-operative blood loss was estimated by using dry weighed gauge pieces to apply pressure on the ooze from the staple line and then weighing them again. A record was kept of the number of clips as well as any other ancillary measures used to secure hemostasis in both groups. Post-operatively, the patients were closely monitored for any bleeding and signs and symptoms suggesting a leak. The hematocrit was estimated before surgery and at discharge from the hospital. The operative time was noted by the anesthetist for both the groups. The operator was blinded for the operative time.

Results: The mean age and BMI in the two groups were comparable. The mean operative time was lower in the Seamguard group though the difference was not statistically significant. There was a significant decrease in intra-operative blood loss ($p < 0.03$) as well as the requirement of hemostatic clips in the Seamguard group. The mean hematocrit dropped from 36.01 to 33.15 in Group A ($p < 0.03$) while it decreased only marginally; from 37.34 to 36.34 in Group B (Seamguard group).

Conclusions: The results from this pilot study suggest that use of Seamguard helps in decreasing bleeding from staple line. It obviates the need of using clips or other hemostatic material.

O.093

SHOULD WE WAIT FOR METABOLIC COMPLICATIONS BEFORE OPERATING ON OBESE PATIENTS?

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Background: A subgroup of obese subjects without metabolic disorders has been identified and defined as Metabolically Healthy but Morbidly Obese (MHMO). The objectives were to compare Roux-en-Y Gastric Bypass (RYGB) outcomes between MHMO and Metabolically Unhealthy Morbidly Obese (MUMO) patients, so as to assess if the obesity phenotype could impact the results. Setting: University-affiliated tertiary care center.

Methods: 102 consecutive patients who underwent RYGB were divided into two groups, MHMO and MUMO, according to Wildman criteria, including Blood Pressure, Triglyceride, High Density Lipoprotein-cholesterol (HDL-c), Fasting Blood Sugar (FBS), C-Reactive Protein (CRP) and Homeostasis Model Assessment-Index Ratio (HOMA-IR). Weight loss and metabolic parameter changes were analyzed.

Results: 21 patients of 102 (20.6%) were identified as MHMO and were mostly females (90.5%) and significantly younger than MUMO patients (39.4 ± 9.1 years versus 47.2 ± 10, p = 0.001). MHMO phenotype was significantly associated with a greater EBL% (p = 0.03), independently of gender, age and redo procedures. All metabolic parameters were significantly improved 2 years after surgery in the MUMO group. HOMA-IR, CRP and triglycerides were significantly lower 2 years after surgery in the MHMO group; whereas, FBS and HDL-c were unchanged. At 2 years of follow-up, 92.3% of the population was metabolically healthy.

Conclusion: RYGB is an effective procedure to achieve weight loss and had a strong positive metabolic effect in both MHMO and MUMO phenotypes. RYGB led to an increase of the metabolically healthy status and may prevent or delay the onset of metabolic disorders.

O.095

SCARLESS BARIATRIC SURGERY

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Background: Conventional laparoscopic technique requires five to seven abdominal incisions for the placement of multiple trocars. Recently concept of “No scar surgery” is quickly expanding in weight loss surgery.

In bariatric surgeries, the SILS technique has been employed to perform adjustable banding, sleeve gastrectomy, Roux-en-Y gastric bypass and biliopancreatic diversion procedures.

Method: Transumbilical incision is used for access in scarless sleeve gastrectomy. The surgical technique involved is identical to that of conventional laparoscopic sleeve gastrectomy. It starts by mobilizing the greater curvature starting 4-6-cm from the pylorus till the angle of His. A vertical gastrectomy is then performed with endoscopic staplers followed by imbrication of staple line.

Results: Single-incision laparoscopic sleeve gastrectomy was associated with less postoperative pain, a lower need for analgesics and a decreased length of hospital stay compared to the conventional multi-port technique.

The surgical scar is almost completely hidden within the umbilicus. Most surgeons do not recommend this procedure for those with a BMI greater than 50 kg/m². and should be avoided in tall patients (height >180 cm).

Conclusion: Scarless bariatric surgery is a new unavoidable trend because of concern about the privacy and quality of life. It has been shown to be a technically more feasible and reproducible procedure for a select group of morbidly obese patients. As this procedure requires far more skill than a conventional multiport surgery, it should be undertaken by experienced bariatric surgeons.

O.101

IS THE ABCD SCORE A USEFUL PREDICTOR OF DIABETES REMISSION AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY?

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Background/Aim: The ABCD scoring system which Lee et al. have developed to predict remission of type 2 diabetes (T2DM) after gastric bypass consists of age, BMI, C-peptide and duration of T2DM (Obes Surg 2013;23:1017). Recently, Lee et al. demonstrated that the system is also useful to predict T2DM remission in non-obese patients (BMI<30) after bariatric surgery (Obes Surg 2015 Feb Epub). The aim of this study was to investigate whether the ABCD score is a useful predictor of T2DM remission after laparoscopic sleeve gastrectomy (LSG).

Methods: Between 2006 and 2014, 83 Japanese obese patients underwent LSG in our institute. This study enrolled 38 patients with T2DM who were followed for more than 6 months. Remission of T2DM was defined as HbA1c<6.0% without drug. Statistical analyses were performed using Fisher's exact test and multivariate logistic regression.

Results: The remission was achieved in 30 of the patients (79%) after 13±5 months follow-up. Univariate analyses showed that preoperative weight (<120kg) and BMI (<35), T2DM duration (≥4 years), ABCD score (≤5), and weight loss (<30kg) were significantly related to failure of remission (p<0.05), while age (≥40 years), gender, C-peptide (<3ng/ml), insulin use, and %excess weight loss (<50%) were not associated. The remission rate in patients with ≤5 of ABCD score was 42%, but that with ≥6 was 96%, with significant differences (p<0.01). Multivariate analysis demonstrated that only ABCD score is a significant predictor (p=0.012).

Conclusion: The ABCD score may also be a useful predictor of T2DM remission after LSG.

O.105

FASTER GASTROINTESTINAL TRANSIT AFTER METABOLIC SURGERY IS ASSOCIATED WITH INSULIN SECRETION & GLYCAEMIA IMPROVEMENT

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Background: Relationship between gastrointestinal transit and glucose homeostasis after bariatric surgery (BS) has not been well studied.

Methods: We analyzed gastrointestinal transit at stomach, small bowel and colon by gastric emptying scintigraphy, and performed serial measurements of glucose and insulin in 21 diabetic patients with BMI≤35 kg/m² who underwent gastric bypass (GB, 7), sleeve gastrectomy (SG, 7) or medical treatment (7).

Results: We found a significant higher percentage of marked counts at the stomach in the control group than in SG until 2 hours after food intake. Compared with GB it was increased even at 180 minutes. Counts percentage at stomach was higher in SG than in GB during the first hour. Correspondingly, counts percentage at the small bowel was higher in the surgical group than in controls during the first 2 hours. It was also higher in GB than SG until 1 hour. In the colon, we found differences at 240 minutes between all groups, however pairwise comparisons had not statistical significance. The faster small bowel arrival in the surgical group correlated with a higher insulin response 30 minutes after food intake (p=0,018; R²=0,535) and it correlated with a lower area under the curve of glycaemia after food intake (p=0,026; R²:-0,059).

Conclusions: Gastric emptying and small bowel arrival was faster in GB than in SG and in SG than in controls. That was related to improved insulin secretion and better glycemic control.

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O.116

COMPARISON OF THREE-YEAR OUTCOMES OF LAPAROSCOPIC GREATER CURVATURE PPLICATION VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Laparoscopic greater curvature plication (LGCP) is a new restrictive bariatric procedure which has a similar restrictive mechanism like laparoscopic sleeve gastrectomy (LSG) without potential risk of leak. Aim of study was to compare effectiveness and safety of LSG and LGCP.

Methods: Multicenter prospective randomized study was started in 2010. A total of 54 patients with morbid obesity were allocated either to LGCP group (n=25) or LSG group (n=27). Main exclusion criteria were: ASA > III, age > 75, BMI>65 kg/m². Operation time, complications, hospital stay, body mass index loss (BMIL), percentage of excess weight loss (%EWL), loss of appetite and improvement of comorbidities were studied during follow-up examination.

Results: All procedures were completed laparoscopically. The mean operative time was 92,0±15 min for LSG and 73±19 min for LGCP (p>0,05). The mean hospital stay was 4,0±1,9 days in the LSG group and 3,8±1,7 days in LGCP group (p>0,05). After 2 years, mean %EWL was 78,9 ± 20 in the LSG group and 42,4 ± 18 in the LGCP group (p<0,01). Loss of feeling of hunger was 28% in LGCP group and 76% in the LSG group (p<0,05). After 3 years, mean %EWL was 72,8 ± 22 in the LSG group and only 20,5 ± 23,9 in the LGCP group (p<0,01). The comorbidities including diabetes, sleep apnea and hypertension, were markedly improved only in LSG group.

Conclusions: Long-term follow-up period showed that LGCP is much worse than LSG and must not be performed to treat patients with morbid obesity.

O.117 ROLE OF ANTRAL RESECTION ON OUTCOMES OF SLEEVE GASTRECTOMY FOR MORBID OBESITY: PROSPECTIVE RANDOMIZED STUDY

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Background: Laparoscopic sleeve gastrectomy (LSG) is a popular surgical method for treatment of morbid obesity, but the technique of this procedure is not standardized. Aim of the study was to investigate the role of antral resection on effectiveness of the procedure in terms of weight loss.

Methods: A prospective randomized study was performed in our clinic from 2012 to 2014. Patients enrolled in the study were randomized into two groups: group 1 (22 patients, gastric transection started 2 cm proximal to the pylorus), and group 2 (23 patients, gastric transection started 6 cm proximal to the pylorus). There were 38 females and 7 males. Mean preoperative weight was $138,9 \pm 21$ kg (range, 98 - 182), mean preoperative excess weight was $70,4 \pm 18,2$ kg (range, 36,5 - 110,8), mean preoperative BMI was $49,6 \pm 6,8$ kg/m² (range, 38 - 65). Preoperative data were comparable in both groups regarding age, sex, BMI, and comorbidities. The primary outcome measure was the percent of excessive weight loss (%EWL), secondary outcomes included postoperative morbidity and improvement of comorbidities.

Results: There were no serious postoperative complications in the both groups. After 24 months in group 1 the mean %EWL was $58,6 \pm 13,9$, in group 2 - $54,2 \pm 12,6$ ($p > 0,05$). There was significant improvement in comorbidities after LSG in the both groups, but there was no significant difference between groups in the number of complications.

Conclusions: LSG is safe and effective procedure with good short-term outcome. There is a tendency of better weight loss in the group with increased size of resected antrum.

O.126 FREQUENT AMBULATORY ADJUSTMENTS ARE BETTER THAN RADIOLOGICAL ADJUSTMENTS OF GASTRIC BANDING? A PROSPECTIVE RANDOMIZES STUDY

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Background: The on-going compliance of patients largely affects the follow-up of adjustable gastric banding (AGB). Frequent ambulatory visits are reported to improve the outcome of the procedure. We compared prospectively 2 different protocols of follow-up: close ambulatory visits Vs more distant radiological adjustments

Methods: 95 consecutive patients residing in our region were submitted to AGB from June, 2012, to June, 2014. The patients were randomized in two groups:

Group 1: 49 patients had radiological band adjustments at 3, 6, 12 months.

Group 2: 46 patients had 8 ambulatory visits, a radiological adjustment after 1 year. All patients underwent anthropometric, laboratory and bioimpedenziometric exams preoperatively, after 6 and 12 months

Results: Preoperative mean BMI was $40,4 \pm 6,5$ in group 1 and $39,7 \pm 5,2$ in group 2.

At 12 months BMI was $34,4 \pm 6,1$ in group 1 e $31,5 \pm 4,7$ in group 2 ($p < 0,05$), %EWL was $35,4 \pm 17,1$ in group 1 and $44,1 \pm 18,3$ in group 2 ($p < 0,05$).

At bioimpedenziometry fat mass decreased of 4,5% in group 1 and 9,9% in group 2 ($p = 0,14$), fat-free mass decreased of 4,2 Kg and 4,3 Kg respectively ($p = 0,2$).

Complications: 2 band slippages in group 1 and 1 in group 2. 1 patient lost to follow-up in group 1, 2 in group 2

Conclusions: Though BMI decrease and %EWL are significantly better in group 2 than in group 1, bioimpedenziometry did not show differences. Frequent ambulatory visits reduced the use and cost of radiological equipment, which proved unuseful in detecting early the slippages, but increased the burden of the visits

O.132 PREDICTORS OF QUALITY OF LIFE AFTER BARIATRIC SURGERY

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Introduction: Bariatric surgery is an effective and safe option that achieves a sustained weight loss, remission of comorbidities and improved quality of life (QOL). Many studies linked improved QOL mainly to magnitude of weight loss and improvement of obesity related comorbidities after surgery. However, still it is not well understood what the predictors of postoperative QOL are. In this study we examined different possible QOL predictors as age, gender, physical activity, integration into work, type of the surgical procedure, %EWL, and patients' compliance to follow up program.

Patients and Methods: We tracked down via phone calls 113 patients who were operated in our hospital between 2003 and 2010. 65 patients had RYGB, 26 LSG, 15 patients BPD with duodenal switch and 7 patients with gastric banding. They were requested to answer the German version of bariatric QOL index questionnaire. Based upon their adherence to our follow up program, patients were classified into drop outs (n= 47,41.6%) and non-drop out (n= 66,58.4%).

Results: Our study demonstrated positive impacts of patient's young age, integration into work and postoperative %EWL on his QOL after surgery. These observations didn't apply to patient's sex, physical activity and type of bariatric procedure.

We observed a significant %EWL in the non-drop out patients more than drop out patients who missed follow up program for more than one year (61.02% vs. 49.92%; $P < 0.013$). In terms of postoperative QOL, we found no significant difference between the 2 patient groups (50.4 points in drop out patients versus 51.7 points non-drop outs; $P > 0.5$).

Conclusion: Different bariatric procedures equally improve QOL after surgery. Young age, integration into work are positive QOL predictors. Adherence to follow up visits are crucial to improve %EWL but not QOL after operation.

O.136

NEUROPATHY POST-LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG); THE FINDINGS

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Background: Laparoscopic Sleeve Gastrectomy (LSG) has gained popularity as the leading bariatric procedure for the treatment of morbid obesity. A serious complication of LSG is neuropathy, unfortunately, little is known in terms of its risk factors. Due to an increase in obesity and rising numbers of bariatric surgeries, neurologic complications have become increasingly recognized. Our aim was to examine the biochemical, hormonal, and genetic factors that are associated with neuropathy in patients post LSG.

Methods: A retrospective study of 1815 morbidly obese patients who underwent LSG at Al-Amiri Hospital, Kuwait (2008-2014). 32 patients were included in the study; 16 patients with neuropathy in the neuropathic group (NG), 16 patients without neuropathy in the control group (CG). Diagnosis was made by a consultant neurologist based on clinical examination, radiological imaging, and nerve conduction studies. Blood samples to examine vitamin deficiencies, biomarkers through genetic analysis, and hormones involved in neuropathy (GLP-1). DNA extraction and genotyping was performed to investigate rs6234 SNP in the PCSK1 gene. T test was used to compare between two groups.

Results: Results showed the mean age of NG 34.9 while the CG was 26.6. The NG & CG's mean preoperative weight was 131 and 120.7, respectively with a mean BMI of 51 and 45.5, respectively. There was no significant difference between BMI ($p = 0.1$) as well as excess weight loss percentages post LSG at 12 months ($p = 0.6$). B12 levels were within normal range, but higher in NG ($p = 0.005$). Vitamin B1 and B2 levels were significantly lower in NG; p values are 0.000 and 0.031, respectively. Vitamin B6 levels were significantly higher in NG ($p = 0.02$) Copper levels were lower in NG ($p = 0.009$). There was no significant difference in GLP1 levels. The allele frequency showed 81.8% of G-allele and 18.2% of C-allele while the genotypic frequency for GG, GC, and CC is 66.94%, 29.75%, and 3.31%, respectively. No significance between the three genotypes and GLP-1; only at minute 15 of withdrawal ($p = 0.03$).

Conclusions: In conclusion, our data showed post sleeve neuropathy is associated with lower levels of vitamin B1, B2, copper, and are older in age. Vitamin B6 was significantly higher in the NG, which is commonly, at toxic levels, associated with neuropathy. No difference in preoperative BMI, excess weight loss % at 1 year, and GLP-1 levels, Rs6234 SNP were found. Larger data is required to validate our results.

O.140

REVISIONAL SURGERY FOLLOWING BILIOPANCREATIC DIVERSION/DUODENAL SWITCH (BPD/DS)

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Background: Revisional operations are inevitable in bariatric surgery to improve result of primary operations or to treat complications or undesirable side effects. We evaluated reasons, options and outcomes of revisional surgery following BPD/DS during its 12-year use in European Center of Excellence.

Methods: Among 555 BPD/DS early revisions were done in 8 (1,44%) pts for leaks (2), bleeding (3), early small bowel obstruction (2), trauma of pancreas (1). 48 revisions in 45 patients (8,1%) were performed in the late postoperative period: 24 (4,3%)- to improve result, 21(3,8%)- to treat undesirable side effects and complications after BPD/DS (mainly for protein malnutrition or Calcium deficiency).

Results: Additional gastric restrictions (Sleeve-resection or plication) provided better weight loss than bowel shortening alone in case of insufficient weight loss after BPD/DS. Two cases of multiorgan failure following bowel restoration were observed in pts with severe long-term protein malnutrition. Calcium and protein deficiency were reversible after bowel restoration.

Conclusions: Both preoperative X-ray of Sleeve and intraoperative measurement of bowel segments are important for definition of the best option for revisions after BPD/DS. Different revisional options are needed in case of Protein and Calcium - deficiency problems.

O.141 UK SEXUAL AND REPRODUCTIVE HEALTHCARE PROFESSIONALS' KNOWLEDGE OF BARIATRIC SURGICAL PROCEDURES AND ASSOCIATED CONTRACEPTIVE PRACTICES

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Background: Women are advised to avoid pregnancy for at least a year following bariatric surgery owing to theoretical risks of rapid weight loss and nutrient deficiencies on mother and baby. Associated weight loss may improve fertility and increase the risk of unplanned pregnancy. Contraception is a vitally important issue but little is known about its provision to women following bariatric surgery. The aim of this survey was to explore the knowledge base of various UK healthcare professionals providing contraception to these women.

Methods: An anonymous on-line survey was distributed by the Research Department at City Hospitals Sunderland NHS Foundation Trust in March 2015. The link was emailed to a wide range of contraceptive providers across the NHS in North East England.

Results: Sixty eight respondents completed the survey. Females (51) accounted for 75% of responses with 23 (39%) working in sexual and reproductive health (SRH) for more than 15 years. Fifty one (75%) had little knowledge of bariatric surgery although 34 (50%) were aware of the effects of malabsorptive procedures on the uptake of oral hormones. Forty one (62%) were aware of the need to avoid pregnancy following surgery, but 62 (91%) were unaware of any published guidance. Contraceptive provision to this group of women varied considerably between professionals.

Conclusions: There is a clearly identified need to improve knowledge of bariatric surgical procedures in those providing contraceptive advice and provision pre and post operatively. Evidence-based national guidance should provide better care and improved contraceptive choice for these women.

O.144 THE REAL COSTS OF TREATING EARLY POST-OPERATIVE LEAKS FOLLOWING SLEEVE GASTRECTOMY PROCEDURES

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Background: Management and treatment of leaks varies depending on time of leak onset, severity of the leak, and on clinician treatment preference. Our previous work noted the NHS costs of treating leaks, in the current study we examine the true costs in self-pay hospitals in the UK.

Methods: A cost model was developed to estimate the combined cost of different procedures used to diagnose, manage, and treat a patient with a post-operative early leak. Procedures included diagnostic tests, drainage, stenting, surgical repairs, IV antibiotics, IV feeding, hospital bed days on ward and ICU. Costs were from WPA Reference Costs (2014) & BNF (2014).

Results: Three scenarios of early septic leaks were compiled, previously established by our leak study panel. The financial cost of treating a patient with each scenario was modelled.

Scenario 1 describes a leak treated with early surgical repair. The financial costs of treating this were £29,212 for a self-pay patient and £14,543 in the UK NHS system.

Scenario 2 represents a leak that cannot be repaired surgically and is treated with repeated stenting. The financial costs of treating this were £63,567 and £35,639 respectively.

Scenario 3 is a leak that cannot be repaired surgically, and eventually requires salvage bypass. The financial costs of treating this were £115,009 and £68,980 respectively.

Conclusions: The true costs of treating a post-operative leak are significant and wide ranging. At a time of considerable financial pressures, avoiding such leaks would be substantially cost-saving.

O.154 THE USE OF KNOTLESS BARBED VERSUS TRADITIONAL SUTURE FOR ANASTOMOSIS CLOSURE IN RYGB: PRELIMINARY RESULTS OF AN RCT

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Background: In this study we assessed feasibility, safety and time-efficiency of intra-abdominal unidirectional knotless closure of the linear stapled gastrojejunal (GJA) and jejunojejunal anastomosis (JJA) in laparoscopic Roux-en-Y Gastric Bypass (RYGB).

Methods: Patients undergoing laparoscopic RYGB between 1/12/2014 and 28/02/2015 were prospectively randomized regarding closure of the linear GJA and JJA: V-group (Vicryl® 2/0 - Ethicon) and S-group (Stratafix™ 2/0 - Ethicon). Time spent on closing the residual opening of the linear anastomosis was measured from first needle in until last knot (V-group) or last stitch (S-group). If needed a non-absorbable “correction” (c) or hemostatic (h) stitch (Prolene® 2/0 - Ethicon) was made.

Results: 72 patients were included (S-group 35, V-group 37). Mean operating time was similar (S-group 63:15min, V-group 63:08min, P=0,975). There was no significant difference in suturing time of both GJA (S-group 7:36min versus V-group 8:09min, P=0,056) and JJA (S-group 6:14min versus V-group 5:59min; P=0,298). Extra stitches (GJA) were performed in 10 patients: 4 (h) and 3 (c) in the V-group - 1 (h) and 2(c) in the S-group. 2 patients (V-group) suffered from postoperative intraluminal bleeding (1 self-limiting, 1 needed endoscopic clipping).

Conclusions: The use of barbed suture for anastomotic closure is feasible and safe. In comparison with traditional suturing fewer extra stitches were necessary and postoperative intraluminal bleeding was less encountered. No significant time benefit was proven. Definitive results after completion of the study (200 procedures) are awaited.

O.168

EARLY ENDOCRINE AND METABOLIC CHANGES AFTER BARIATRIC SURGERY IN GRADE III MORBIDLY OBESE PATIENTS – A RANDOMIZED CLINICAL TRIAL COMPARING SLEEVE GASTRECTOMY AND GASTRIC BYPASS

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Background: We compared the early endocrine and metabolic changes associated with sleeve gastrectomy (SG) and gastric bypass (GB) in grade III obese patients. Studies with early changes have the limitation of long-term outcomes. However, they are important to clarify the possibility of any others mechanisms to improve the comorbidities that are independent of weight lost. Besides that, probably these metabolic and endocrine mechanisms are different between gastric bypass and sleeve gastrectomy.

Methods: Fifty morbidly obese patients were randomized into two groups based on their position in the queue: group A – SG and group B – GB. Comparison between the two groups was based on clinical and laboratory variables such as fasting blood glucose, insulin, HOMA-IR, glycosylated hemoglobin, lipids, albumin and ferritin. Patients were assessed after 7, 14, 30, 60 and 90 days and additional laboratory tests were done on the 90th day.

Results: The following mean values were recorded for groups A and B, respectively: age (years) – 36.4 and 31.1, weight (kg) – 123.2 and 128.3, BMI (kg/m²) – 45.6 and 47.3. In the first postoperative week, group B showed a greater weight loss (p = 0.047) that was not observed after 14, 30, 60 and 90 days (p>0.05). Group A had an average excess weight loss of 31.09 kg compared to 32.69 kg in group B (p = 0.222). Glycemic control was better in group B (p = 0.023), whereas the control of systemic arterial pressure was better in group A (p = 0.026). There were no significant differences in early lipid control and micronutrient deficiencies between the two groups.

Conclusion: SG and GB were equally effective in promoting weight loss after 90 days. However, whereas SG was associated with better early remission rates for hypertension, GB was more effective in glycemic control; there was no difference in the protein or vitamin deficiency of the two groups.

O.173

READMISSIONS FOR MALAISE: EFFECT OF AGE, BMI, AND GENDER

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Background: Malaise is a major cause for readmissions and involves conditions that may be reduced through appropriate patient education and behavior. In this study, we 1) report 30-day readmission rates resulting from malaise or physical issues following totally robotic Roux-en-Y gastric bypass (TR-RYGB), 2) examine the effects of BMI, age, and gender on rates of malaise, and 3) discuss methods for improvement.

Methods: Readmission rates (30-day) were analyzed retrospectively for 1,234 patients, 28% of whom were males vs. 72% females, 39% with a BMI ≥50 vs. 61% with a BMI <50 and 74.9% <60 years(y) vs. 25.1% ≥60y. Malaise was defined as benign pain, nausea/vomiting, dehydration, lodged food, constipation/diarrhea. Physical causes for readmissions included ulcers, strictures, infections, leaks, pulmonary emboli, others.

Results: For all patients, 30-day readmission rates averaged 5.83%, with 3.82% due to malaise and 2.91% to physical issues. No significant differences (chi sq p>0.05) in 30-day readmissions (malaise or physical) occurred between males vs. females or individuals with a BMI <50 or ≥50. Physical readmission rates for patients <60y vs. ≥60y also did not differ. However, readmission rates for

malaise were nearly 3-fold higher among the younger vs. older patients (4.47% vs. 1.60%). Major causes for malaise for the younger cohort were benign pain and issues related to failure to follow dietary guidelines.

Conclusions: The majority of 30-day postoperative readmissions results from malaise and occur at a higher rate for younger than older patients. Guidelines to reduce malaise will be presented.

O.174 IS LMWH SUFFICIENT ENOUGH IN VTE PROPHYLAXIS IN BARIATRIC SURGERY: PERI-OPERATIVE EVALUATION OF THE COAGULATION PROFILE IN BARIATRIC PATIENTS

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Background: Alteration in the coagulation profile, such as increasing function of platelets and coagulation factors, was reported in morbidly obese patients. Morbid obesity increases the risk for thromboembolic events.

There is no clear protocol for thromboembolic prophylaxis in bariatric surgery regarding the timing of prophylaxis and the length of treatment.

Thromboelastography provides information about the coagulation process starting from the creation of the clot till the fibrinolysis.

Methods: Coagulation profile was measured by thromboelastography in ninety morbidly obese patients who underwent bariatric surgery. Thromboelastography was performed before surgery, in the immediate postoperative period within three hours from surgery, and in the early post-operative period within 10-14 days after surgery. Venous thromboembolic prophylaxis was achieved by giving 40 mg of Low Molecular Weight Heparin (LMWH) once a day starting a day before surgery.

Results: Patients were recruited within a period of two years. Sixty seven of them underwent Sleeve Gastrectomy while twenty three underwent Roux en Y Gastric Bypass.

We found normal values of coagulation factors function, clotting time and fibrin function as measured by R, K and α Angle. We also found increased value of MA reflecting increased function of platelets. The average of MA value before the surgery was above normal and kept on rising consistently in the immediate post-operative and later in the early post-operative period.

Conclusions: This study raises questions about the reasons of the increased risk of thromboembolic events in the morbidly obese patients, the appropriate thromboembolic prophylaxis, and the optimal length of treatment.

O.176 LIFE-THREATENING COMPLICATIONS AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: GASTRIC NECROSIS AND HEMOPERITONEUM

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Background: Until now, laparoscopic adjustable gastric banding (LAGB) is a widely applicable surgical procedure in Korea. This is attractive in terms of less invasive, easy, and reversible. However, our institute have experienced three life-threatening complications after LAGB. Based on this, we want to focus on the complications that would be rare but serious.

Methods : Between 2014 and 2015, three patients who underwent re-operation for delayed complication after LAGB were reviewed.

Results :

1. Gastric necrosis

1) A 28-years-old female

History of LAGB: 5 years ago

Presenting Symptom and sign : Abdominal pain/bloating and rigid abdomen

Operative findings : Gastric fundus necrosis around band

Management : Total gastrectomy with Roux-en-Y reconstruction

Prognosis : Uneventful recovery

2) A 45-years-old male

History of LAGB: 3 years ago

Presenting Symptom and sign : Abdominal pain and rigid abdomen

Operative findings : Gastric upper body necrosis around band

Management : Total gastrectomy with Roux-en-Y reconstruction

Prognosis : Uneventful recovery

2. Hemoperitoneum

1) A 36-years-old female

History of LAGB: 6 years ago

Presenting Symptom and sign : Nausea/epigastric pain and rigid abdomen

Operative findings : Active bleeding from perigastric vessels around the slipped band

Management : Laparoscopic suture ligation of bleeder

Prognosis : Uneventful recovery

Conclusions : LAGB could induce rare but life-threatening complications sometimes. Thus, surgeons should be aware of serious complication and take proper management at early stage.

O.179

LAPAROSCOPIC GASTRIC BYPASS (GBP) AND INTRAABDOMINAL PRESSURE: A RANDOMISED STUDY

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Background: Intraabdominal pressure (IAP) during laparoscopic surgery may increase postoperative discomfort. Effects on pain have been studied but nausea has not been subjected to randomised studies. We studied the influence of IAP on access, operation time and postoperative pain (abdomen and shoulders) as well as nausea, supine and standing.

Patients and Methods: Fifty consecutive gastric bypass patients, not part of any other study, were randomised after initiation of anaesthesia. Groups were well matched for age, sex and BMI. Study arms: intra-abdominal pressure of 12 (IAP₁₂) or 18 (IAP₁₈) mm Hg. Surgeons and ward personnel were blinded. Operative time was noted. Visual analogue scales were used. Surgeon assessed access, patients assessed pain (abdomen - shoulder) and nausea (supine - standing) at six points in time during the first 20 postoperative hours.

Results: In 3/25 patients in the IAP₁₂ group the code was broken due to access problems vs. 0/25 in the IAP₁₈ group (p=0.1398). Operative time did not differ between groups. Access was assessed as significantly better for IAP₁₈, (92.2 ± 2.3 vs. 69.3 ± 4.2; p= 0.0001). Postoperative shoulder pain was maximal after 6 hours, but throughout the study period less than in the abdomen (p < 0.0001); there were no differences in pain between IAP₁₈ and IAP₁₂ (p= 0.7408). Postoperative nausea was significantly greater standing than supine, but without differences between groups.

Conclusion: Higher IAP may lead to better access with no obvious effect on pain or nausea. Studies on postoperative nausea should include assessment also with patients standing.

O.181

IMPACT OF ABILITI® SENSOR-BASED FEEDBACK ON EATING BEHAVIOR, PHYSICAL ACTIVITY AND WEIGHT-LOSS IN OBESE PATIENTS.

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Background: All obesity treatments, including bariatric surgery, are most effective when combined with behavioral therapy and regular follow-ups. The closed-loop abiliti® system (CLGES) provides tailored gastric electrical stimulation activated by food entry into the stomach, and sensor-based data to medical professionals to direct aftercare. The aim of this study was to analyze behavior change using sensor-based food intake and activity data in participants with the CLGES system.

Methods: Food intake data and activity data (3D accelerometer) was collected at baseline and at monthly follow-ups to 12 months (12M) in a subset of obese participants (N=45) in a multi-center trial with a 12M weight-loss endpoint. All participants received individualized counseling based on device recorded 24 hour sensor data at monthly follow-ups. Measured food intake parameters included: number of intakes during allowed and disallowed periods, night-time intakes, and between-meal snacks (average/day). Activity parameters included: time in different levels of physical activity (min/day), sleep/sedentary (hours/day), and estimated energy expenditure (EE).

Results: Excess weight loss averaged 38.4±22.4%. Stable reduction in the number of disallowed meals and between-meal snacks (p<0.05), an increase in all levels of physical activity (p<0.001), and an increase in activity based EE (303±53 kcal/day on average across all follow-ups, p<0.001), was seen compared to baseline.

Conclusions: Significant improvement in eating and activity was seen in participants. Feedback of the sensor-based data allowed the caregiver to “observe” the participant 24 hours/day. We hypothesize that the Hawthorne effect may have produced behavior change, and be a factor in the improved weight-loss compared to other clinically tested GES systems.

O.182

A DOUBLE-BLIND PROSPECTIVE RANDOMIZED CONTROLLED TRIAL COMPARING MULTIVITAMIN SUPPLEMENTS AFTER SLEEVE GASTRECTOMY IN MORBIDLY OBESE PATIENTS: VITAAL STUDY

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Background: After sleeve gastrectomy (SG) there is an increased risk for nutritional deficiencies. Most common are iron, vitamin B12 and folic acid deficiencies. A new multivitamin supplement (WLS Optimum, WLSO) adjusted for SG patients was developed based on

published literature to reduce those deficiencies. The aim of this double-blind randomized controlled study was to determine the effectiveness of WLSO compared to standard multivitamin supplement (SMVS) after SG.

Methods: Between November 2011 and August 2014, patients who were scheduled for a SG were randomized for WLSO and SMVS for a period of 1 year. WLSO holds higher nutrition's, e.g. vitamin B12 400% RDA, iron 150% RDA, and folic acid 150% RDA. The SMVS consists approximately 100% RDA for all supplements. Primary outcome was 25% reduction of vitamin and mineral deficiencies after 1 year.

Results: In total 150 patients (75 in each group) underwent a SG procedure. Weight, BMI, sex and excess weight loss were similar for WLSO and SMVS ($p>0.05$). Mean serum levels for iron, vitamin B12, folic acid and vitamin D were similar at baseline in both groups ($p>0.05$). Data is now being collected and analyzed. Preliminary data shows less deficiencies for vitamin B12 and ferritin. Until now no adverse events concerning the supplement usage in both groups.

Conclusions. Preliminary results shows that the optimized multivitamin supplement, WLSO, is safe and results in less vitamin B12 and ferritin deficiencies. At time of the IFSO congress in Vienna we are able to present the final one year results of this study.

O.183

A LONGER BILIOPANCREATIC LIMB IN ROUX-EN-Y GASTRIC BYPASS RESULTS IN MORE WEIGHT LOSS AND REMISSION OF TYPE 2 DIABETES MELLITUS: A RANDOMIZED CONTROLLED TRIAL

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Background: The Roux-en-Y Gastric Bypass (RYGB) is the most performed bariatric procedure worldwide. However, there is no uniformity on limb length for optimal weight loss and reduction of obesity related comorbidities. The aim of the present study was to evaluate the effect of a Long Biliopancreatic Limb RYGB (LBPL-RYGB) and Standard RYGB (S-RYGB) in morbid obese patients.

Methods: In this randomized controlled trial 144 morbid obese patients, who underwent a primary RYGB, were randomized; 74 patients underwent a S-RYGB (Roux/Biliopancreatic limb 150/75 cm) and 70 patients a LBPL-RYGB (Roux/Biliopancreatic limb 75/150). The primary outcome was percentage Excess Weight Loss (%EWL). Secondary outcomes were remission of Type II Diabetes Mellitus (T2DM) and complication rates. Furthermore we evaluated the differences in incretine and bile acids between both procedures.

Results: Baseline characteristics between S-RYGB and LBPL-RYGB were comparable, mean BMI was 44.3 (35.1-56.2) kg/m² and 123 (85%) patients were female. At 24 months an EWL of 74% for S-RYGB versus 83% for LBPL-RYGB was achieved ($p=0.005$). Thirty-four (24%) patients had T2DM at baseline; mean HbA1c decreased from 62 ± 23 to 41 ± 11 mol/mol ($p<0.001$). In the LBPL-RYGB 71% patients achieved complete remission of T2DM versus 50% patients in the S-RYGB group. The short- and long-term complication rates were comparable ($p>0.05$). In addition, differences in incretine and bile acid levels after both procedures are being determined (data is now collected).

Conclusions: A LBPL-RYGB results in more EWL with comparable complication rates. Also more complete remission of T2DM was found after LBPL-RYGB.

O.186

EFFECTS OF BARIATRIC SURGERY ON INSPIRATORY MUSCLE STRENGTH

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Introduction: The respiratory function is affected by obesity due to an increased deposition of fat on the chest wall.

Objectives: The objective of this study was to investigate the strength of the inspiratory respiratory muscles of obese individuals and the possible influence of bariatric surgery.

Methods: Of the patients referred to our bariatric centre between the 3rd of October 2011 and the 3rd of May 2012 the Maximum Inspiratory Pressure (MIP) was measured at screening and 3, 6 and 9 months postoperative.

Results: The mean age of the 124 included patients was 42.9 ± 11.0 years and mean BMI was 43.1 ± 5.2 kg/m². The mean predicted MIP preoperatively was 127 ± 31 in cm H₂O and the mean measured MIP was 102 ± 24 in cm H₂O. Three patients (2.4%) received training. Three months after surgery the MIP was 76 ± 26 cm H₂O, after 6 months 82 ± 28 cm H₂O and after 9 months 86 ± 28 cm H₂O. All postoperative measurements were significant lower than preoperatively ($P<0.05$). No significant difference was found between patients who had a sleeve gastrectomy compared to a gastric bypass ($P=0.06$, $P=0.165$ and $P=0.124$ after 3, 6 and 9 months respectively). The only influencing factor for the preoperative MIP was age ($p=0.014$).

Conclusion: The preoperative MIP values were significantly lower than the predicted MIP values and a significant decrease in inspiratory pressures was found at 3, 6 and 9 months after bariatric surgery.

O.188

COMPARATIVE ANALYSIS OF RESPIRATORY MUSCLE STRENGTH BEFORE AND AFTER BARIATRIC SURGERY USING FIVE PREDICTIVE EQUATIONS

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Introduction: Obesity is the most common chronic metabolic disease worldwide, with detrimental effects on respiratory function. Less is known about the recommended reference values for respiratory muscle strength in the morbidly obese population.

Objectives: This study aimed to evaluate respiratory muscle strength in the morbidly obese population, before and after bariatric surgery, and to compare these estimates with the predictive values using different mathematical equations available

Methods: A multidisciplinary team screened patients referred to a bariatric centre preoperatively. Their Maximum Inspiratory Pressure (MIP) was measured at screening and 3, 6 and 9 months postoperative. Predictive values were calculated using five different mathematical equations. Visual inspection of Bland-Altman plots was performed to determine the agreement between the equations studied.

Results: In total 122 patients were included in this study, among them were 104 females and 18 men, with a mean age was 43.02 ± 11.11 years and mean BMI was 43.10 ± 5.25 kg/m². There were no significant differences between the predicted MIP (according to Neder, Harik-Khan, Enright, Costa and Wilson equations) and the actual obtained MIP preoperatively (p>0.05). Also there were no significant between the predictive values and the postoperative MIP values. (P>0.05) Bland Altman analysis showed that the Enright equation was best suitable for predicting the MIP.

Conclusion: Of the five mathematical equations studied, that of Enright and colleagues was found best suitable for predicting the MIP in the obese population studied.

O.189

ASPECTS OF EXERCISE BEFORE OR AFTER BARIATRIC SURGERY: A SYSTEMATIC REVIEW

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Introduction: Bariatric surgery has a considerable effect on weight loss. A positive relation of exercise and weight loss has been described before.

Objectives: To systematically review the mode of exercise and its timing pre- or postoperative or a combination in the bariatric surgical population.

Methods: A multi database search was conducted. Identified articles were reviewed on description of exercise, timing around a bariatric intervention and outcome. Methodological quality of the included studies was rated using the Physiotherapy Evidence Database scale. A Cohen's kappa score assessed the level of agreement. Outcome measurements were improvement of anthropometric and physical fitness variables, operation related complications, weight regain and quality of life.

Results: A total of eight prospective studies were included. Four focussed on training before and four on training after a bariatric procedure. Details of exercises varied from 45 minutes treadmill up to full descriptive programs. Supervision was frequently included. Significant improvement was encountered for biometric results physical fitness variables.

Conclusion: In the majority of reports on exercising in a (future) bariatric population, a positive effect on anthropometrics, cardiovascular risk factors and physical fitness was described. However, the results were not unanimous, with a wide range of exercise programs and peri-operative timing and therefore hampering adequate practical guidance.

O.190

CURRENT STATUS OF PREOPERATIVE OESOPHAGO-GASTRO-DUODENOSCOPY (OGD) IN UK BARIATRIC NHS UNITS

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Background: Preoperative OGD (p-OGD) is often routinely employed in patients undergoing bariatric surgery. The value of p-OGD is still unclear; however, since all bariatric procedures modify stomach anatomy differently, the question arises whether there is a rational for including it routinely in the preoperative pathway.

Methods: To assess the current status of p-OGD in UK, we sent to BOMSS' members a Survey on pre-operative evaluation of patients, focusing on the role of p-OGD. 49 UK bariatric units (in excess of 5000 patients estimated caseload/year) answered.

Results: From this Survey emerged that 44 units (90%) include OGD in the preoperative workout, routinely or selectively. After OGD 25 units (51%) changed operative plans, because of: peptic ulcer (46%), hiatus hernia (43%), Barrett's oesophagus (32%) or GIST (25%). Only 2 units (7%) found incidental GI cancer. When specifically asked, p-OGD was believed to be essential in patients with family history of gastrointestinal cancer (61%), pernicious anemia (57%) and reflux symptoms (54%). 5 units (10%) considered p-OGD completely unnecessary. Only 11 units (25%) wouldn't be able to accommodate routine p-OGD in all patients.

Conclusions: Most units value p-OGD, either selectively or routinely, in preparation for bariatric surgery. However it seems to be a discrepancy on the specific risk factors involved in selection process. National and international guidelines on p-OGD are advocated.

O.193 REVISION OF LAPAROSCOPIC SLEEVE GASTRECTOMY TO LAPAROSCOPIC GASTRIC BYPASS. INDICATIONS AND OUTCOMES

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Background: Laparoscopic Sleeve Gastrectomy (LSG) is a stand-alone procedure, initially conceived as one-step approach to Duodenal Switch/Roux-en-Y Gastric Bypass(LRYGB). LSG conversion to LRYGB has also been advocated as revisional surgery for weight regain(WR) or severe reflux(GORD).

Methods: Retrospective analysis of 647 primary LSG undertaken between January 2008 and December 2014. LSG were calibrated over 32Ch Bougie and stapled 5cm from pylorus.

Conversions from LSG to LRYGB were performed for WR or GORD.

Standard antecolic LRYGB was performed with 120cm alimentary and 80cm bilio-pancreatic limbs. Small vertical gastric pouch was fashioned over 32Ch bougie

Results:

Over the study period 19/647 LSG patients were converted to LRYGB.

14 patients had conversion for WR after median of 38 months(range:12-57) and total weight loss(TWL) of 14%(range:8–29). After conversion to RYGBP, TWL progressed to 16%(range:4-23) at 6 months and back to 14%(range:0-22) at 12 months.

5 LSG patients were converted for GORD after a median of 24 months(range:8-35) and TWL% of 19%(range:15–25). In this group weight gain was recorded after conversion with TWL of 13%(range:5-16) at 6 months and 10%(range:0-14) at 12 months.

All GORD patients no longer required PPI postoperatively.

Conclusions: Revision of LSG to LRYGB is effective for GORD but is associated with weight regain. Conversion for WR alone should be avoided, since no additional weight loss is achieved after 1 year.

O.194 SURGICAL PROCEDURE VERSUS QUALITY OF LIFE: A COMPARATIVE STUDY

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Introduction: Bariatric surgery is known to improve quality of life (QoL). We report the findings of a prospective study designed to compare the effects of surgical procedures on QoL.

Methods: The population included 104 bariatric patients having either Roux-en-Y gastric bypass (RYGB), a sleeve gastrectomy (SG), or adjustable gastric band (AGB), and 25 age-matched lean controls (LC). Quality of life was assessed preoperatively and at one and two postoperative years using the Impact of Weight on Quality of Life (IWQOL) questionnaire which consists of eight domains (health, social/interpersonal relationships, mobility, work, self-esteem, sex, activities of daily living, and eating).

Results: Preoperatively, there were no significant differences between surgical procedures for scores on the IWQOL, BMI, age, or gender. Average scores of all IWQOL domains for the bariatric patients were significantly ($p < 0.001$) below the LC. Total % change in BMI significantly declined (27.7%, year one and 28.7%, year two). Percentage BMI changes were nearly two-fold greater for the RYBB and SG than for the AGB. All IWQOL domains significantly ($p < 0.0001$) improved at postoperative year one, with further improvements in health, relationships and activities of daily living at year two. Improvements in IWQOL at postoperative years one and two were significantly greater for the RYGB and SG than for the AGB due, in part, to the superior weight loss of these procedures.

Conclusions: Bariatric surgery improves quality of life, and, to a greater extent for the RYGB and SG than AGB.

O.196 REVISIONAL SINGLE ANASTOMOSIS- OR MINI-GASTRIC BYPASS FOR FAILED RESTRICTIVE PROCEDURE: FIVE-YEAR RESULTS.

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Background: Revisional Laparoscopic Roux-en-Y Gastric Bypass (rLRYGB) for failed restrictive procedure is the “gold-standard” revisional procedure. Laparoscopic mini-gastric bypass (LMGB) is an alternative to LRYGB, but long-term outcomes of revisional LMGB (rLMGB) have not yet been analyzed.

Objectives: To assess the five-year outcomes of rLMGB and compare them with five-year outcomes of primary LMGB (pLMGB).

Methods: 126 patients who underwent LMGB between October, 2006 and October, 2008 were included in this retrospective study. Mortality, morbidity (graded using the Clavien-Dindo score), weight loss (body mass index (BMI) and percent excess BMI loss (%EBMIL)), co-morbidities remission and quality of life (Gastrointestinal Quality of Life Index (GIQLI)) were assessed.

Results: Thirty patients (24%) who had prior restrictive bariatric surgery (laparoscopic adjustable gastric banding=22, vertical calibrated gastroplasty=4, sleeve gastrectomy=4) underwent conversion into LMGB (rLMGB group). Ninety-six patients (76%) underwent pLMGB (pLMGB group). Both groups were comparable in age, gender, BMI and preoperative co-morbidities. There were no deaths and major complications rate was 10%. No increase in morbidity rate was found between the two groups. At five years, mean BMI was 32 kg/m² and mean EBMIL was 66% after rLMGB; no significant differences were found when compared to pLMGB (BMI=31kg/m², %EBMIL=73%). Co-morbidities remission rate were statically similar. Overall GIQLI score was significantly lower in the rLMGB group (104.1±17.6 vs. 112.5±16.8, p=0.025). Significant differences were found in the “upper gastro-intestinal symptoms” and “psychological” scores.

Conclusion: rLMGB for failed restrictive procedure is safe and effective in the long-term. Quality of life and upper gastro-intestinal functional results are lower when compared to pLMGB.

O.200

NADROPARIN AND ANTI-XA ACTIVITY AFTER BARIATRIC SURGERY

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Introduction: Morbidly obese patients have an increased risk for venous thrombo-embolism (VTE), especially after bariatric surgery. Therefore the assumption is made that the postoperative dosage thrombosis prophylaxis in morbidly obese patients should be higher than the standard treatment (Nadroparin 2850 IU once daily) in patients with normal weight.

Objective: The aim of the current study is to evaluate the relation between anti-Xa activity and bodyweight.

Methods: Between March 2013 and May 2015, all patients scheduled for a Roux-en-Y Gastric Bypass (RYGB) with a bodyweight over 140 kg were recruited. 2850 IU Nadroparin were administered preoperatively in 50 patients scheduled for RYGB. Postoperatively 5700 IU were administered in a second group of 50 patients. On both occasions anti-Xa levels were determined.

Results: 100 Patients were included with a median weight of 151±10 kg and a BMI of 49±4 kg/m². At this point in time the anti-Xa levels are being assessed. We will present the relation between body weight and anti-Xa levels. Secondly we will present the correlation between BMI, glomerular filtration rate and anti-Xa activity.

Conclusions: The definitive conclusions will be presented on the IFSO World Congress 2015. For now outcomes show that both 2850IU and 5700IU once daily seems insufficient to reach sufficient anti-Xa activity.

O.201

REVERSIBLE VAGAL NERVE BLOCKING (VBLOC) IN PATIENTS WITH MODERATE OBESITY AND AN OBESITY RELATED CO-MORBID CONDITION: THE RECHARGE STUDY

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Background: Twelve month results from the randomized, controlled ReCharge Clinical Trial of 239 obese patients with BMI 40 to 45 or BMI 35 to 40kg/m² with at least one obesity-related condition(s) were reported previously.

Methods: Moderately obese subjects with at least one co-morbid condition were randomized to the VBLOC device (n=53) or sham group (n=31). Percent excess weight loss (%EWL), blood pressure, heart rate, lipids and safety are reported through 12 months.

Results: VBLOC group demographics were 79% female, BMI 38±2kg/m², age 53±8 years and sham demographics were 81% female, BMI 38±2kg/m², age 51±7 years (mean±SD). Baseline subject conditions: 59% hypertension, 70% dyslipidemia, 30% sleep apnea, 8% type 2 diabetes. 46 and 27 subjects presented for 12 month visit in the VBLOC and sham group, respectively. Mean EWL at 12 months was 31% (95%CI, 24 to 38) in VBLOC group and 18% (95%CI, 12 to 25) in sham group using last observation carried forward method compared to 34% (95%CI, 26 to 41) and 20% (95%CI, 13 to 27), as observed. Improvements in blood pressure, heart rate and lipids in VBLOC group are shown. Improvements were observed in the sham group commensurate with weight loss. No serious device-related complications were observed the first year.

Parameter	Baseline	12Month	Change	95%CI
SBP(mmHg)	130±11	124±13	-5.6±13	[-9.5, -1.6]

DBP(mmHg)	80±9	78±8	-2.7±9	[-5.4, 0.1]
Fasting Glucose(mg/dL)	101±20	93±14	-7.3±15	[-12.1, -2.5]
HR(bpm)	76±10	70±8	-6.4±10	[-9.3, -3.6]
Total Cholesterol (mg/dL)	216±36	202±37	-13.2±34	[-23.6, -2.9]
HDL(mg/dL)	55±16	55±13	0.2±9	[-2.6, 3.0]
LDL(mg/dL)	131±35	123±34	-6.6±33	[-16.7, 3.4]
TG(mg/dL)	150±62	117±53	-34.0±57	[-51.3, -16.6]

Mean±S.D.

Conclusions: Reversible vagal nerve blocking with the implantable Maestro System results in medically meaningful weight loss and improved obesity-related risk factors in moderately obese subjects with co-morbidities.

O.203 HISTOLOGICAL GASTRO-ESOPHAGEAL LESIONS OF BILIARY REFLUX AFTER OMEGA-LOOP GASTRIC BYPASS IN A MURINE MODEL

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Background: Technically simpler than Roux-en-Y gastric bypass, Omega-Loop gastric Bypass (OLGB) presents similar results in weight-loss and metabolism improvement. The concerns are malnutrition and potential risks of biliary reflux leading possibly to esophageal or gastric cancer.

Objectives: In a rat model of OLGB, we study the metabolic consequences and search histological signs of biliary reflux on esophageal and anastomosis mucosa.

Methods: Obese Wistar rats were operated on OLGB or Sham. Weight and malabsorption were assayed over time. After sacrifice, bile acid (BA) composition was determined by HPLC MS/MS in all intestinal segments and feces. Histology was performed on formalin-fixed esophagus, gastro-jejunal anastomosis, and alimentary limb sections. Statistical analyses used ANOVA and t-tests.

Results: After OLGB, an important weight loss (17% after 20 days) is maintained over 50 days and oral glucose tolerance is improved. Malabsorption is objectified by an increased energy leakage and fecal lipid and protein losses. Jejunal luminal BA concentrations were doubled in OLGB rats ($P < 0.01$ vs Sham). Histological examination revealed an increased diameter and cell proliferation of OLGB alimentary limb ($P < 0.01$, vs Sham), and mucosal signs of reflux: foveolar hyperplasia of the anastomosis, and hyperpapillomatosis of the esophagus.

Conclusions: Our model recapitulates OLGB weight loss and glycemic improvement. However the increased jejunal luminal BA concentration and the typical histological lesion of biliary reflux in upper gastro-intestinal mucosa will require further studies to determine the risk of bile reflux on the esophageal mucosa.

O.205 FIRST ESTABLISHED ADOLESCENT BARIATRIC CENTER OF EXCELLENCE: GUIDELINES, PROCEDURES, PITFALLS AND SOLUTIONS

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Background: Adolescent obesity, a seemingly nonexistent occurrence to children of the 1960's, has developed into one of the most chronic diseases plaguing children today. Comorbidities commonly associated with adult morbid obesity, such as type II diabetes mellitus, hypertension, and dyslipidemia, are now diseases associated with a much younger subset of morbidly obese patients (15-21 YOA). With the astronomical quadrupled growth of adolescent obesity in just 30 years time, consideration for more invasive treatments such as surgical management of adolescent obesity, has been tested, tried, and found wanting. We present the case of the first established Adolescent Bariatric Center of Excellence in the United States. The following review discusses the epidemiology of adolescent obesity, markers for operative therapy, optimal surgical procedures for adolescent weight loss, multidisciplinary management for this unique patient population, and surprising outcomes of our program.

Methods: The following study consists of forty-one ($n=41$) adolescent bariatric patients (Male=26, Female=15) with ages ranging from 15-21 years of age who received sleeve gastrectomy. All patients received weight check and blood workup and general examination pre-operatively and post operatively at 1 week, 1 month, 3 months, 6 months and 1 year. All patients were enrolled in the Adolescent Bariatric Center of Excellence at Bristol Meyer Squibb Children's Hospital and subject to all requirements including nutrition, exercise,

and support group regimens. Patients were accessed for excess weight loss, resolution of comorbidities, complications, vitamin deficiencies, and general quality of life.

Results:

	Male	Female
Excess Weight Loss	83%	80%
Resolution of T2DM	100%	95%
Resolution of Hyperlipidimia	100%	None
Resolution of Joint Pain	100%	100%
Complication Rate	0%	0%
Vitamin Deficiency	0%	0%
Quality of Life Increase After Surgery (1-10 before/1-10 after)-100	60.5%	58.5%

Conclusions: Surgery for obesity in adolescents has particular risks and benefits that must be accounted for when considering an invasive approach due to their unique physiological, psychological and emotional needs. As such, reasonable guidelines are necessary to ensure successful/safe weight loss in adolescent patients.

O.206

SLEEVE GASTRECTOMY UNDER BLOCK ANESTHESIA WHERE DO WE STAND?

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Obesity become a major health problems affecting the whole globe.

Metabolic surgery is gaining popularity despite a 1-7% complication rate.

General anesthesia carries a significant risk and especially in the obese patients with comorbid conditions(COPD, sleep apnea, diabetic and coronary artery diseases).

Block anesthesia may be a safe type of anesthesia for the obese patients with multiple comorbidities and for the patients who have the fear of general anesthesia.

We presented hereby our preliminary experience in over 40 cases of sleeve gastrectomy under block anesthesia in different category of patients.

O.207

A COMPARISON BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC GASTRIC PPLICATION; A MATCHED COHORT STUDY OF OUTCOMES IN ONE YEAR FOLLOW UP

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Background: Laparoscopic gastric (greater curvature) plication (LGCP) is a relatively new bariatric procedure. Controversies exist regarding this emerging surgery that successfully reduces the gastric volume by plicating the gastric greater curvature. The aim of this retrospective non randomized matched study was to compare short-term outcomes in terms of weight loss, associated complications and comorbidity improvement comparing LGCP and laparoscopic sleeve gastrectomy (LSG).

Methods: Our study was performed between January 2012 to March 2013, an equal number of patients underwent either LGCP (n = 30) or LSG (n = 30). Patients matched for sex and BMI. Data on the operative time, perioperative complications, hospital stay, overall cost of LSG and LGCP, weight loss (WL), percentage of excess weight loss (%EWL) and improvement of comorbidities were collected during the follow-up examinations.

Results: All procedures were completed laparoscopically. The mean operative time was 177 ± 17.4 minutes for the LGCP group and 113 ± 18.4 minutes for the LSG group ($P < 0.0001$). No patient required reoperation due to an early complication.

The mean hospital stay was similar in both groups ($P < 0.167$). The total cost of LSG was ($\$4,500 \pm 200$) compared to LGCP ($\$2,200 \pm 100$) ($P < 0.001$). One year after surgery, the mean %EWL was (28.38) in the LGCP group and (43.5) in the LSG group ($P = 0.011$). The comorbidities, including diabetes, sleep apnea and hypertension, were markedly improved in both groups at 6 months after surgery.

28(93.3%) patients in the LSG group have improved quality of life, satisfied with the surgery and even recommend to others while in the LGCP group only 16(53.3%) were satisfied.

Conclusions: Our comparative study demonstrated that the excess weight loss pattern was comparable in the first six months between the LGCP and LSG group, however at one year follow up the excess weight loss was superior in the LSG group. The resolution of comorbidities like diabetes, OSAS and hypertension was remarkable in both groups. No serious post operative complications were observed.

The costs were significantly less in the LGCP group.

Prospective trials with longer follow up are needed to confirm the long-term outcomes of this procedure.

O.209

PREDICTING T2DM REMISSION AFTER METABOLIC SURGERY: A COMPARISON OF Dia Rem and ABCD SCORING SYSTEM

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Background: Metabolic surgery has been adopted as a novel treatment modality of type 2 diabetes mellitus (T2DM) in obese patients. Scoring system might be helpful in the selection of appropriate T2DM patients for metabolic surgery. This study compares two grading system with regard to the remission of T2DM

Methods: Outcomes of 245 (150 women and 95 male) patients who underwent gastric bypass surgery for the treatment of T2DM with one year follow-up were assessed. The DiaRem score is composed of age, HbA1c, medication and insulin usage. The ABCD score is composed of the age, BMI, C-peptide levels and duration of T2DM (years). The remission of T2DM after gastric bypass surgery was evaluated using both scoring system.

Results: At one year after surgery, the weight loss was 26.5% and the mean BMI decreased from 35.7 to 26.2 Kg/m². The mean HbA1c decreased from 8.8 to 6.2%. 130(53.1%) patients had complete remission (HbA1c < 6.0%), 36(14.7%) patients had partial remission (HbA1c < 6.5%) and 26(10.6%) patients improved (HbA1c < 7%). Both groups can predict the success of metabolic surgery but ABCD score has a better differentiating prediction at patients of relative poor score (Table).

Conclusions: Both DiaRem and ABCD score grading system can predict the success of T2DM remission after metabolic surgery but ABCD score has a better differentiating power.

DiaRem Score				ABCD Score			
DiaRem Score	N	Remission	Completed Remission Rate	SCORE	N	Remission	Completed Remission Rate
0-2	5	5	100.0%	10-9	12	12	100.0%
3-7	68	58	85.3%	8-7	44	39	88.6%
8-12	108	47	43.5%	6-5	62	42	67.7%
13-17	21	8	38.1%	4-3	83	33	39.8%
18-22	43	12	27.9%	2-0	44	4	10.7%
Total	245	130	53.1%	Total	245	130	53.1%

O.219 EFFICACY AND SAFETY OF THE DUODENAL-JEJUNAL BYPASS LINER: A PROSPECTIVE COHORT STUDY OF 200 PATIENTS

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Background: The duodenal-jejunal bypass liner (DJBL)/ Endobarrier™ is an endoscopic, non invasive treatment for diabetes mellitus type 2 (T2DM) and obesity. The aim of this study is to evaluate the safety and effects on T2DM and obesity of the DJBL.

Methods: Inclusion criteria for DJBL placement were: age 18-70 years, BMI 28-45 kg/m², and use of at least two different types of oral anti-diabetics or insulin. Patients using non-steroidal anti-inflammatory drugs or anticoagulant medication were excluded. The DJBL was explanted after an implantation period of 12 months, because of intolerability, or adverse events.

Results: Between March 2011 and January 2015, 200 patients underwent a DJBL implantation procedure of which 182 (91%) implantations were successful. In 18 patients the device could not be placed because of anatomical difficulties or bulbar ulcerations. In total 137 DJBLs were explanted at time of analysis, of which 48 were explanted before completing the entire implantation period because of intolerability or adverse events. Body weight decreased from 107.8 ± 17.6 to 95.7 ± 16.2kg (p<0.001), which is comparable to a total body weight loss of 11 ± 6.8%. Mean HbA1c decreased from 65 ± 17 to 59 ± 16 mmol/L (p<0.0001). 28 Patients suffered from an adverse event, of which 13 patients (7%) developed gastrointestinal bleed and 5 patients (3%) acute pancreatitis.

Conclusions: The DJBL is a minimal invasive endoscopic treatment which leads to significant improvement of T2DM and weight. However, this treatment can be associated with serious adverse events.

O.220 WHAT HAPPENS TO WEIGHT AND TYPE 2 DIABETES AFTER EXPLANTATION OF THE DUODENAL-JEJUNAL BYPASS LINER?

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Background: The duodenal-jejunal bypass liner (DJBL) is a novel endoscopic bariatric technique. The DJBL improves glucose control and induces weight loss in obese patients with type 2 diabetes (T2DM) during its implantation period. The aim of our study was to evaluate the effects of the DJBL on T2DM and weight after explantation.

Methods: Patients between 18 and 65 years old, BMI 28–45 kg/m², and T2DM with use of at least two different types of oral anti-diabetics, and/ or the use of insulin, were eligible for implantation of the DJBL. All patients were included in which the DJBL was explanted and a minimal follow-up period of 6 months after explantation was completed.

Results: Between December 2011 and March 2014 a total of 142 DJBL were implanted. At time of analysis 70 patients completed 6 months, and 45 patients completed 12 months of follow-up after explantation. Early results showed a significant decrease in weight and HbA1c during implantation of the DJBL, but an increase of weight and HbA1c after explantation. More detailed analysis are currently carried out and will be presented at IFSO 2015.

Conclusions: The DJBL induces weight loss and improves glucose intolerance in obese patients with T2DM during implantation of the DJBL. However, after explantation, a gradual increase in weight and HbA1c is seen. Therefore, a prolonged implantation period or re-implantation of the DJBL might improve the beneficial effects of the DJBL or remain patients stable over a prolonged period of time.

O.221

BY-BAND TO BY-BAND-SLEEVE: ADAPTATION OF A LARGE SCALE RCT TO INFORM CURRENT PRACTICE

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Background: The UK By-Band Study aimed to compare the effectiveness of adjustable gastric band (AGB) and Roux-en-Y gastric bypass (RYGB) for severe and complex obesity. A pre-planned pilot phase was undertaken to establish if recruitment was possible. The pilot provided the opportunity to reconsider if Sleeve gastrectomy (SG) should be included.

Methods: After 24.4 months of recruitment in two centres, progress against pre-agreed decision criteria were reported to the trial funder. Criteria focused on rates of referrals for surgery, trial eligibility, recruitment, cross-over and loss to follow-up. Evidence from completed and on-going RCTs and current rates of UK obesity surgery were reviewed.

Results: The pilot established recruitment was possible; all decision criteria were achieved (333 screened, 231 (69%) eligible, 80 randomised, 3 crossed-over and 3 lost-to-follow-up). Evidence from on-going trials was not widely generalizable and the quality was often poor. UK audit data showed rates of SG were increasing. Whilst rates of AGB were decreasing in the public sector it remained the commonest procedure undertaken in private practice. An adapted three-group study was agreed to increase the sample to 1341 patients to be recruited from 12 centres with >40 surgeons involved. Surgery has key mandated, flexible and prohibited standards, which are monitored closely. Current progress is 773 patients screened, 576 (75%) eligible, 183 randomised, 5 crossed-over and 5 lost-to-follow-up.

Conclusions: By-Band-Sleeve is a large-scale pragmatic trial which will recruit for four more years. It will provide an evidence base to inform practice relevant to patients, surgeons and health care providers.

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O.222

REVISIONAL SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS: ANALYSIS AFTER 3 YEARS OF FOLLOW-UP

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Introduction: It is estimated that revisional bariatric surgery (RBS) may be necessary in up to 20% of patients due to weight regain, surgery-derived complications, among others. Here we report our experience in converting laparoscopic sleeve gastrectomy (LSG) to gastric bypass (RYGB).

Methods: Retrospective analysis of our bariatric surgery (BS) database. Patients converted from LSG to RYGB between 2005 and 2013 were identified. Data such as demographics, RBS indications, symptoms, comorbidities resolution and %EWL were followed.

Results: 36 patients were identified, mean age 40 ± 7 , 31 (86.1%) men, pre-LSG median BMI 36.7 (28.9–60.2), pre-RYGB median BMI 34.3 (17.6 – 47), mean interval between surgeries 45 ± 22 months. RBS indications and frequencies were: weight regain (WR), gastroesophageal reflux (GERD), WR+GERD and gastric stenosis (GS), 20 (55.6%), 7 (19.4%), 4 (11.1%) and 5 (13.9%) patients, respectively. Among those operated due to WR, mean %EWL after 6, 12, 24 and 36 months after RYGB was 51 ± 21 , 63 ± 30 , 57 ± 35 and 50 ± 43 , respectively. Additionally, considering pre-LSG initial weight, 36 months %EWL was 60 ± 34 . In patients with GERD, 71% resolved and 29% improved symptoms. All patients with GS resolved symptoms. There were 5.5% early complications (1 pseudomembranous colitis and 1 gastrojejunal stenosis), but no late complications nor conversions.

Conclusions: LSG to LRYGB as RBS is a feasible and safe procedure. Although patients achieve a 50% EWL after 3 years, combining both procedures results in 60% EWL. Also, RBS in our series resolved or improved most of symptoms in patients whose indications were GERD and GS.

O.225

TREATMENT OF VITAMIN DEFICIENCY AFTER BARIATRIC SURGERY

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Introduction: It is well known, that bariatric surgery sometimes leads to malabsorption and other severe complications. Some vitamins are decreased even before surgery. After procedures patients show low level of vitamins and clinic accordingly.

Aim: was to identify the level of vitamins and clinic before and after performing bariatric surgery in patients who were prescribed and in those, who did not intake drugs.

Objectives: A survey was conducted of 130 patients (50-gastric bypass, 50- sleeve gastrectomy and 30 gastric banding). Among them were 42 men and 88 women, whose average age was 38 ± 7 years. 100 of them were prescribed vitamins right after surgery. 30 patients took nothing.

Methods: All patients in the serum was determined by the level of vitamin D, B1, B2, B5, B6, B9, B12, C, niacin, biotin, retinol-binding protein.

Results: The study found that before the operation performance of some vitamins were below normal in more than 80% cases, but they did not demonstrate clinical signs. After surgery (sleeve and bypass) a lack of some vitamins increased and most of patients had clinical signs (hair loss-92%, pain in joints- 87%, decrease in memory, mood- 75%). In those, who took drugs, we registered no laboratory and clinical deficiencies ($p < 0,001$).

Conclusion: This data demonstrate the need of profilactic intake vitamins right after sleeve and gastric bypass. That will allow to avoid complications and to increase quality of life of the patients.

O.226

BETA CELL IMAGING IN BARIATRIC PATIENTS

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Background: Roux-en-Y Gastric Bypass (RYGB) surgery in morbid obese patients with type 2 diabetes mellitus (T2DM) induces complete diabetes remission in 75% of patients. A rare long-term complication after RYGB is hyperinsulinemic hypoglycemia (HH). The underlying mechanisms of both effects are not completely understood, but beta cell function and mass (BCM) might play an important role.

To characterize BCM in vivo, pancreatic uptake of radiolabeled glucagon-like peptide-1 analogue, exendin, can be visualized by single photon emission computed tomography (SPECT) or positron emission tomography (PET).

We will examine the potential of radiolabeled exendin to elucidate the role of BCM in T2DM resolution and HH after RYGB, started with SPECT of one HH patient.

Methods: SPECT was performed 5 hours after injection of 157 MBq ¹¹¹In-labeled exendin in one patient with HH (BMI=31 kg/m², age=33 years, 7 years post-RYGB). Pancreatic exendin uptake was compared to healthy subjects from a previous study (BMI: 28.5-25 kg/m², age: 21-60 years, normal glucose tolerance).

Results: Pancreatic ¹¹¹In-exendin uptake in this HH patient was comparable to the healthy subjects (800-2500 counts/MBq/pancreas), as well as pancreatic ¹¹¹In-exendin distribution.

Conclusion: In this HH case, pancreatic ¹¹¹In-exendin uptake was determined and comparable to healthy subjects, there was no evidence of beta cell hyperplasia. However, for final conclusion, larger series are required. These initial promising results, together with

a phantom study that showed promising results for PET, open the way for exendin-PET patient studies to examine the role of BCM in T2DM resolution and HH after RYGB.

O.228

BETTER WEIGHT LOSS AND LESS REOPERATION RATE FOLLOWING LAP BAND IN SELECTED PATIENTS.

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Hôpital europ en Georges-Pompidou

Background: Laparoscopic Adjustable gastric banding (LAGB) is a widely recognized technique with low morbidity. We have previously reported five predictive factors of success after LAGB: age<40 years, preoperative BMI<50 kg/m², advanced laparoscopic bariatric team, patients prone to change their eating behaviors and to practice physical activity. We report the results on a cohort of 500 selected patients.

Methods: Between 2005 and 2014, 558 patients underwent LAGB, according to the selected criteria. Fifty-eight patients dropped out follow-up. Safety (mortality, morbidity) and efficacy (body mass index (BMI) and percent excess weight loss (%EWL)) were compared to our unselected historical series of 1227 LAGB.

Results: mean follow-up was 40±12 months. There were no deaths. In the selected group, preoperative mean age was 39±12 years and preoperative mean BMI was 42.5±4 Kg/m². Morbidity rate was 8% (15 slippages, 7 food intolerances, 4 oesophageal dilatations, 3 intragastric migrations, 15 port problems) and reoperation rate was 4,4%. LAGB were removed in 15 patients (3%). Significant decreases in morbidity (8% vs 26%, p<0,001), reoperation (4,4% vs 10%, p<0,001) and band removal rate (3 vs. 10%, p<0.01) were found in the selected group when compared to the historical series. At five years, significant differences were found in BMI changes and %EWL between the selected group (mean BMI=31±8 kg/m², mean %EWL= 55%) and the historical group (mean BMI=34±7 Kg/m², mean %EWL=42%).

Conclusion: Patients selected on the basis of predictive criteria have a significantly lower risk of surgical complications and failure, as well as a higher loss of weight compared to the unselected patients.

O.229

FAILED MINI- OR ONE ANASTOMOSIS-GASTRIC BYPASS (MGB): SURGICAL STRATEGIES.

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Background: Laparoscopic mini-gastric bypass (LMGB) is an alternative to laparoscopic Roux-en-Y gastric bypass (LRYGB) due to efficacy and safety profile. However, the presence of bile in the afferent limb and the 200 cm long bypass imply some specificity.

Methods: Between 2006 and 2013, 1000 morbidly obese patients underwent LMGB. Mortality and morbidity were assessed. Complications were graded using the Clavien-Dindo score. Re-operations after LMGB were specifically analyzed.

Results: 36 patients (36/1000) had revisional surgery after LMGB. 16 early and 14 late major complications required surgery. Leaks occurred in 6 patients (6/1000); it can lead to biliary peritonitis and must be treated by conversion into RYGB (in all cases). Two late ulcer perforations were treated by emergency laparotomy with T-tube insertion. Bowel obstruction due to postoperative adhesions required surgical treatment (laparoscopic approach) in 5 patients. No cases of internal hernia or bowel resection occurred. 7 patients (7/1000) presented intractable biliary reflux and required successful laparoscopic conversion into RYGB (but the common limb length must be longer than three meters down to the ileocecal valve). Concerning weight loss, four patients with inadequate weight regain due to pouch dilation had pouch trimming 4 years after LMGB. Two patients developed severe malnutrition and required restoration of the normal anatomy three years after LMGB. Surgical reversion can be easily performed in laparoscopically.

Conclusion: LMGB appears to be safe with low reoperation rate. Laparoscopic conversion into RYGB and reversion into a normal anatomy can be easily performed when necessary. It should then be considered in the armament of bariatric surgeons.

O.230

FAST-TRACK IN BARIATRIC SURGERY. THE BENEFITS ABOVE THE MYTHS.

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Introduction: The rates of obesity and the demand for Bariatric Surgery has increased. Given the high costs involved in surgery, either in preoperative evaluation, surgical supplies, hospitalization and controls, it is necessary to be more efficient without altering the results, in order to optimize resources, without neglecting the safety and effectiveness of the intervention.

Objectives: The outcome of our cohort is to assess the safety of the Fast-Track program in patients undergoing bariatric surgery.

Method: Fast-Track was defined as: less than 36 hours between the surgery and the discharge of the patient. From January 2013 to January 2015, a prospective cohort in a selected group of patients who met the following requirements: without intraoperative incidents and with an optimal postoperative evolution. The epidemiology, surgical complications, readmissions, reoperations and mortality within 30 days of the surgery were analyzed.

Results: A total of 133 patients: 37 vertical gastrectomies, 92 laparoscopic Roux-en-Y gastric bypass (LRYGB), 4 LRYGB with cholecystectomy. Average age 37.6 years (range 16-66). Gender 65.4% women. BMI average 37.1 kg/m² (range 30-53,5). There were 2 patients (1,5%) with perioperative complications which required readmission and reoperation: one patient with portal thrombosis and other with leakage of the gastric remnant. There was no mortality in this group.

Conclusion: Patients can be safely discharged before 36h postoperative. In selected patients, the fast-track program does not increase perioperative morbidity and mortality, and reduces the costs of hospitalization for the patient and health care systems.

O.231

ELIPSE™: THE FIRST PROCEDURELESS GASTRIC BALLOON FOR WEIGHT LOSS

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Background: Gastric balloons have been used effectively for decades as weight loss devices but require endoscopy for placement and removal. Elipse™ (Allurion Technologies, Wellesley, MA USA) is the first procedureless gastric balloon that is swallowed and excreted 3 months later. The aim of this study was to assess the safety and efficacy of Elipse™.

Methods: Each patient swallowed one Elipse™ device which was filled with 550mL of filling fluid through a thin delivery catheter that was then removed. Each device was designed to remain in the stomach for 3 months. After 3 months, the balloon was designed to empty and pass in the stool.

Results: Eight patients were enrolled with a mean BMI of 34.3 kg/m². All 8 patients successfully swallowed the Elipse™ device. As expected with balloon therapy, all patients experienced nausea and vomiting during the first 48 hours. There were no other adverse events. At 3 months, the mean percent total body weight loss was 6% (range: 2.4-9.7) and mean percent excess weight loss was 25.4% (range: 6.5%-47.3%). All 8 balloons were uneventfully excreted in the stool.

Conclusions: This study demonstrates the safety and efficacy of Elipse™, the first procedureless gastric balloon. There were no serious adverse events, and the weight loss after 3 months was similar to endoscopically placed balloons.

O.232

A RANDOMIZED CONTROLLED MULTICENTER STUDY OF AN INCISIONLESS OPERATING PLATFORM FOR PRIMARY OBESITY (POSE) VS. DIET-EXERCISE ALONE: THE MILEPOST STUDY

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Background: The POSE is a new minimal invasive procedure to treat obesity. G-Cath EZ suture anchors are placed endoscopically to durably plicate the gastric fundus. The purpose of this study was to compare safety, satiety, and weight loss outcomes of subjects undergoing POSE plus diet and exercise to those following diet and exercise alone.

Methods: A non-blinded, randomized controlled trial was conducted in 3 EU countries. Following Ethics approval, 44 subjects (mean age 38) with baseline BMI of 30-40 were randomized in a 3:1 (treatment: control) ratio. Treatment group received pose with diet and exercise guidance. Control received diet/exercise guidance only. Parameters were: change in mean % total body weight loss (TBWL) (6 and 12 months post randomization) and change in oral satiety testing. Control subjects can choose active treatment at one year.

Results: Groups were comparable (BMI 36.2 treatment vs 37.1 control). There was a significant reduction in mean %TBWL in treatment 12.5 % (n=31) versus control 8.1% (n=9) at 6 months (p < .004). Gastric capacity change (oral satiety test) is statistically significant for the treatment group between baseline and 6 months (p<.0001) but not for the control group (p=.103). There were no serious adverse events related to device or procedure.

Conclusions: POSE provides a safe and superior weight loss solution over diet/exercise alone to date. The effect may be caused by increased satiety.

O.240

EFFICACY OF MINI GASTRIC BYPASS IN DIABETIC PATIENTS WITH BODY MASS INDEX LESS THAN 34 KG/M2 , SHARJAH EXPERIENCE

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Objective: Many reports have showed that patients who have undergone laparoscopic MGB have experienced resolution of type 2 diabetes. The UAE ranks as the fifth fattest nation in the world, and the diabetes rate of roughly 20 percent for residents and 25 percent for Emirati nationals. The aim of our study was to evaluate the efficacy and safety of MGB in morbidly obese UAE subjects with type 2 diabetes mellitus.

Methods: From March 2011 to March 2014, morbid obese patients with T2DM underwent MGB enrolled in this study. The change in fasting blood sugar, postprandial blood sugar, and glycosylated hemoglobin, C-peptide, total body weight and the use of oral hypoglycemic agents and insulin at the end of one year were studied.

Result: A total of 135 patients with type 2 diabetes mellitus (95 women and 40 men age 40.5 ± 7.9 years, body mass index 29.91 ± 2.43 kg/m², and hemoglobin A1c $8.9\% \pm 1.6\%$) had undergone MGB. Before MGB, 110 patients (81.5%) required oral hypoglycemic agents and 25 patients (18.5%) required oral hypoglycemic agents and insulin).

Resolution of type 2 diabetes was achieved in 108 (80%), remission in 25 (18.5%) and stable in 2 (1.5%) patients at one year after MGB. The diabetes resolution rates for those with pre-operative C-peptide <3, 3–6, and >6 ng/mL were 3/25 (12%), 85/90 (94.4%) and 20/20 (100%), respectively.

Conclusion: MGB is an effective the treatment of T2DM in with Body mass index less than 34 Kg/M2 UAE patients. C-peptide as the predictor of successful T2DM resolution should be evaluated and used as patient selection criteria. The possible mechanisms explaining improvement in glycemic control need further investigation. . Pending long-term evaluation, MGB is an effective, relatively low-risk, and low-failure bariatric procedure .

O.247

10 YEARS EXPERIENCE IN SCOPINARO'S BILIOPANCREATIC DIVERSION

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Introduction: During the last 25 years, biliopancreatic diversion (BPD) has been an excellent operation for morbid obesity, to achieve long-term weight reduction. Currently, Scopinaro's operation is perceived as the most effective operation for long-term weight loss . this is reflected by increasing number of PBD procedures in the last years. Nevertheless, this procedure is not without postoperative complications, and these are perhaps excessive for patients with a BMI <45 kg/m²

Objective: To express our experience at King Abdulaziz Hospital NGHAK.S.A (2006 – 2015)

Materials & Methods: 816 patients underwent laparoscopic Scopinaro BPD. all patients were involved in obesity surgery programme according to our hospital policy, including assessment of the patients for obesity and comorbidities ,initiating dietician counseling ,endocrine evaluation ,screening for the risk of surgery and management accordingly ,psychiatric review if needed

Results: Operative time(180-55 min); Bleeding, 6 patients, two patients with intra operative bleeding that required laparotomy, the other four patient were scoped after 24 hours and managed laparoscopically; Leak: in one patient due to disrupted Gastro-juj. Anstomosis; Conversion to open five patients due to either bleeding or extensive adhesions; Hospital stay(2-7) days, with average 3.6 days; 90 % of the patients lost most of the excess weight in the first 18 months reaching BMI (25-32)KG/M2,with average weight loss (21-134)kg, with maintained ,durable weight loss. Our results will be presented in details

Conclusion: BPD is considered the most effective surgical procedure for the treatment of obesity and associated comorbidities. However the operation should be adopted for each patient according to their intellectual and nutritional habits as well as their understanding of the complications.

O.250

REVISION OF SCOPINARO'S BILIOPANCREATIC DIVERSION

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Introduction: Scopinaro ' s Biliopancreatic Diversion has got complication in the form of flatulence , diarrhea, hypoproteinemia. Physicians are reluctant to do it because of these complications in spite of the fact that it is the best procedure in terms of loss of weight and management of co-morbidities of diabetes.

Material's & Methods: 89 patients' revisions of Scopinaros BPD due to different reasons.73 patients with hypoproteinemia will be presented. The highest 8.3% were in the first 3 years where we were in the learning process and sticking to the classical Scopinaros BPD (50cmcommon limb and 200 alimentary limb) with experience, we modified the classical BPD to suit each individual.The percentage of hypoproteinemia declined to less I% .

Results: Scopinaro ' s Biliopancreatic Diversion is a safe procedure and the serious complication of hypoproteinemia is minimal and can be corrected by a simple procedure.

Conclusion: A short video presentation will be presented

O.252 LAPAROSCOPIC ADJUSTABLE GASTRIC BAND AT MORE THAN 10 YEARS. IS THERE ANY POINT IN DOING IT TODAY?

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Background: Although Laparoscopic Adjustable Gastric Band (LAGB) is one of the most used surgical techniques to treat morbid obesity there is still no consensus about its long-term efficacy. The aim of this study is to compare our results at more than 10 years with those already published in the literature.

Methods: We retrospectively evaluate 86 LAGB patients. All of them have more than 10 years of follow-up (mean follow-up 13 years, range 10-15) and their final results are compared with those series that present results at long term.

Results: Mean follow-up was 13 years (10 -15). BMI dropped from the initial 40 to a final 32 with an average weight loss of 20 kg and %EWL of 42%. 30% of the patients report being satisfied with the technique, 33% are moderately satisfied and 37% are clearly dissatisfied. In 33% of the patients the band had to be removed due to insufficient weight loss or technical problems. Published studies present highly variable results with final BMI ranging between 31 and 38, and %EWL between 30 and 64. Mortality rate is 0.01% (1 / 6,492) but with a high rate of late complications requiring band removal in up to 40-60% of cases.

Conclusions: Although LAGB has a very low mortality rate, there is a significant number of patients who fail to get acceptable weight loss or complicate with technical problems at long term leading to a high number of revisions and removals.

O.256 SURGICAL SITE INFECTIONS (SSI) AFTER BARIATRIC SURGERY

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Introduction: Morbid obesity represents a well known risk factor for the development of surgical site infections (SSI). In the era of open bariatric operations SSI occurred in up to 20 percent of patients. The incidence of SSI after laparoscopic bariatric surgery has been found to be surprisingly low.

Objectives: Investigation of occurrence, predisposing factors, type and course of SSI after minimal invasive bariatric procedures.

Methods: Analysis of data of 163 patients operated between January 2013 to December 2014. All SSI occurring up to 30 days postoperatively were monitored and classified according to the classification of the Center of Disease Control (CDC). In all patients preoperative and postoperative variables were monitored prospectively and documented with the National Surgical Quality Improvement Program (NSQIP).

Results: SSI developed in 10 patients. SSI were classified as subcutaneous in 4, abdominal wall in 1 and organ space in 5 patients. All SSI occurred after procedures including gastrointestinal anastomosis. Six of ten SSI occurred in patients after redo procedures.

Conclusion: SSI involving the subcutaneous tissues or the abdominal wall occurred at a frequency of three percent. We found the following factors with prognostic relevance: Procedures including gastro-intestinal anastomosis and redo operations.

O.257 SURGICAL THERAPY OF RECURRENT HYPOGLYCEMIA AFTER ROUX Y EN GASTRIC BYPASS

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Introduction: Recurrent hypoglycemia represents a rare but dangerous late complication after Roux en Y gastric bypass and is caused by increased insulin secretion due to exaggerated resorption of glucose in the small intestine. Most patients can be successfully treated by dietary changes or medication leading to reduced intestinal absorption of glucose. However, in a minority of patients surgery is necessary to correct hypoglycemia.

Objectives: Presentation of results after surgery for recurrent hypoglycemia as a long-term complication of Roux en Y gastric bypass.

Methods: Three patients were operated for recurrent hypoglycemia which could not be corrected by dietary or medical regimens. In all three patients the alimentary limb was connected to the antrum of the excluded antrum of the stomach. The section of the alimentary limb distal to this anastomosis was resected.

Results: The postoperative course was uneventful in all three patients. Hospital stay was 4 days on average. During follow-up 6 months to 2 years after surgery no further hypoglycemic episodes occurred.

Conclusion: Anastomosis of the alimentary limb to the excluded gastric antrum and resection of the limb distally to this anastomosis represents a simple and effective treatment of recurrent hypoglycemia after Roux en Y gastric bypass.

O.258**LAPAROSCOPIC PROXIMAL BANDING AFTER FAILED GASTRIC BYPASS, AND SLEEVE GASTRECTOMY A HISTORICAL COHORT STUDY****Eliezer Avinoah**, Leonid Lansdberg, Solly Mizrahi*Surgery A, Soroka medical center, faculty of health sciences, Ben-Gurion university, Beer-Sheva, Israel*

Long term follow up after gastric bypass and sleeve gastrectomy can reach 40% failure rate. It mostly explained by their loss restrictive components. We describe our clinical experience following the proximal adjustable banding of the gastric bypass and the sleeve patients.

Patients and methods: We followed 37, and 17 patients who had proximal adjustable banding after failed gastric bypass and sleeve gastrectomy respectively. Their mean original BMI was 43 ± 7 and all patients were followed for a mean of 44 ± 13 months. The first group was compared to randomly chosen corresponding group after original banding with the same gender age, follow up time, and original BMI.

Results: There was no significant difference in postoperative weight loss between the redo and originally banded group ($p=0.278$). The redo group has lost 12.647 (from 43 ± 48 to 30.84 BMI). Control group after original banding has lost 10.274 units (BMI from 42.9 ± 6.9 to 32.7 ± 7.4). There was significant difference between the groups with regard to operation length and hospital stay. Operation length in the reoperation group was 65 ± 25 and 20 ± 13 minutes in the banding group. Postoperative hospital stay in the reoperation group was 22.8 ± 18 hours, and 14.8 ± 15 in the original banding. Despite the significant difference in operation time and hospital stay there was no difference with regard to major complications between the compared groups.

Conclusions: We found the proximal gastric banding is a long term efficient bariatric restrictive solution after the gastric bypass and sleeve failures. Furthermore, it is a safe operation as a second bariatric surgery.

O.261**DOES PRE-OPERATIVE ENDOSCOPY REDUCE THE NEED FOR REVISIONAL SURGERY IN SLEEVE GASTRECTOMY?****C. McCormack**², M. Boyle¹, C. Parmar¹, L. Dunn¹, N. Schroeder¹, S. Balupuri¹, W. Carr¹, K. Mahawar¹, PK. Small¹, NA Jennings¹.¹ *Sunderland Royal Hospital, Sunderland, United Kingdom.*² *University of Newcastle upon Tyne, Newcastle upon Tyne, United Kingdom.*

Background: The incidence of sleeve gastrectomy is increasing rapidly around the world. The use of pre-operative endoscopy varies between centers. In our practice the commonest cause for revisional surgery following sleeve gastrectomy is intractable reflux disease. We hypothesized that the introduction of routine pre-operative endoscopy may reduce the incidence of revisional surgery.

Methods: We audited our sleeve gastrectomies from 2007-2014 for all cases with a minimum of 12 months follow up. We introduced compulsory endoscopy for all sleeve gastrectomy patients in 2010. Revisional surgery rates were compared between patients who had and had not undergone pre-operative endoscopy prior to surgery. Following 2010 patients with a significant hiatus hernia or evidence of reflux disease at endoscopy were advised to undergo Roux-en-Y gastric bypass (RYGB) rather than sleeve gastrectomy.

Results: 464 patients were eligible for the study. 74 patients did not have a pre-operative endoscopy compared to 338 patients who underwent pre-operative endoscopy. The rate of revisional surgery was 9.5% (7/74) in patients with no endoscopy compared to 2.5% (10/390) in patients who were endoscoped prior to surgery. The difference observed between the two groups was statistically significant when analysed using the Chi squared calculation ($p=0.029$).

Conclusions: This study suggests that the use of pre-operative endoscopy may be associated with a reduction in revisional surgery rates for sleeve gastrectomy. The authors believe that pre-operative identification of a hiatus hernia or signs of reflux disease allowed patients to be counseled to undergo an alternative procedure (RYGB).

O.264**QUALITY OF LIFE AFTER BARIATRIC SURGERY****Piotr Major**, Maciej Matlok, Michal Pedziwiatr, Piotr Budzynski, Mateusz Wierdak, Marcin Migaczewski, Andrzej Budzynski*2nd Department of Surgery, Jagiellonian University Collegium Medicum*

Introduction: Morbid obesity together with obesity-related diseases have a negative impact on the quality of life. The aim of the study was to assess the quality of life among patients with morbid obesity as well as the impact of bariatric treatment on body weight and obesity-related diseases in addition to conducting an analysis of changes in the QOL after surgical treatments, in the context of the surgical procedure type and degree of body weight loss.

Aims: A study was planned which aimed at assessing the quality of life among people with morbid obesity, analyzing the impact of bariatric surgery on body weight and obesity-related diseases, as well as changes in the quality of life after surgical treatment, in the context of different surgical procedures and degrees of weight loss.

Material and methods: 148 patients were treated for morbid obesity. The sample group consisted of 31 patients treated with LSG and 34 persons qualified for LRYGB. Before commencement of the surgical treatment, the quality of life was assessed, which in both groups qualified for given types of bariatric procedures was considerably low.

Results: %EWL was 58.8%. No significant differences in body weight loss were noted between the two types of procedures. The quality of life was enhanced significantly. No differences were noted in terms of quality of life improvement between particular types of surgical procedures.

Conclusion: No significant differences were observed during the analysis of body weight loss impact on quality of life improvement.

O.265

1000 GASTRIC PPLICATION: TECHNIQUE, OUTCOME, AND COMPLICATIONS

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Introduction: Conventional bariatric surgeries are associated with severe complications and a high rate of failure or weight regain. The author presents his experience in Gastric Plication, over a period of 5 years, as a new method for the treatment of obesity.

Objectives: define the place of gastric plication among the restrictive surgeries.

Methods: 1110 Laparoscopic Greater Curvature Plication “LGCP” were performed over a period of 60 months. A total of 672 patients responded to inclusion criteria: 219 men and 453 women. Their mean age was 35.99 +/- 10.85 years. Their mean Body Mass Index (BMI) was equal to 39.93 +/-6.15 kg/m²

Results: The average % of excess weight loss “EWL” at 1, 3, 6, 12, 18, 24, 36 months was 30.19, 47.07, 63.05, 68.15, 68.62, 69.29% and 66.36% respectively. Moreover, this study was divided into two subgroups and results were studied based on the type of suturing and patient’s BMI over a period of 1 year. The first subgroup included 183 patients, where gastric plication was performed with continuous suturing at the first and second row. The second subgroup included 186 patients, where gastric plication was performed with separated stitches at the first row and continuous suturing at the second row. In the second sub-group, a higher degree of EWL% was found. The complication rate was greater in the first subgroup. The overall rate of immediate surgical complications was 1.55% including (0.27%gastric leak,0.27% bleeding,0.68% gastric obstruction by fold oedema,0.27% gastro-gastric hernia necrosis).the treatment of these complications was conservative for the gastric fold obstruction and for bleeding ,and was surgical, by unfolding the gastric plication for the gastric leak ,and for the gastro-gastric hernia necrosis cases.

Conclusion: Gastric Plication is safe, and efficient on EWL based on short and midterm results. The combination of Separated suturing at the first row and continuous suturing at the second row is associated with a higher EWL%, lower rate of complications and a short hospital stay.

O.267

ADHERENCE TO VITAMINS AND MINERALS AFTER BARIATRIC SURGERY AT THE MAIN PUBLIC BARIATRIC CENTER IN MEXICO (CLIO).

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Background: Adherence to vitamin/minerals supplementation is essential to avoid malnutrition after bariatric surgery. In Mexico an ideal supplementation scheme is complicated and only achieved after consuming over 5 pills and B12-Vitamin injections.

Methods: A cross-sectional study to evaluate supplementation adherence was performed in patients who had bariatric surgery from 2010-2014 at CLIO with 95% confidence level and 5% confidence interval. To evaluate adherence Morisky-Green and Hermes validated versions tests were performed. Demographics, costs and causes for not taking the supplementation were asked. Chi-square-test was used in the analysis, (p ≤0.05 significant).

Results: From 780 patients, n=258 tests were performed. (81% female), with 39.2±10.2 years. Follow up after surgery was 11±9.1 months. A poor correlation among tests was observed, (55.4% and 22.1% compliance) with Hermes and Morisky-Green respectively. Supplementation was observed in 86.8%, never the less; 4.65% fulfilled the ASMBS requirements (p≤0.05). Monthly cost of \$64.6±39.7. Taste, dizziness and missing follow up were the main factors related to poor adherence.

Conclusions: A poor supplement adherence was observed after bariatric surgery. Most patients from our clinic have a low economic level; a high cost of supplements (46.6±31.3% of minimal income) could be an associated factor. A strategy to include bariatric supplements in the public drug program is encouraged.

O.269

NUTRITIONAL SUPPLEMENTATION AFTER BARIATRIC SURGERY AT THE MAIN PUBLIC BARIATRIC CENTER IN MEXICO (CLIO)

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Background: Nutrient deficiencies are the most common secondary effect after bariatric surgery. No ideal bariatric supplement regimen or consensus is available in Mexico. Multidisciplinary team follow up is essential to achieve an adequate supplementation in order to avoid malnutrition

Methods: A cross-sectional study to evaluate nutritional supplementation was performed in patients who underwent surgery from 2010 to 2014. Sample size: 95% confidence level and 5% confidence interval. Demographic variables, supplementation of Multivitamin(MV), Calcium(Ca), Iron(Fe), B12-Vitamin(VB12) and consumption of pill and related symptoms were obtained through a direct blinded questionnaire. T-student-test was used in the analysis ($p \leq 0.05$ significant).

Results: Questionnaires were applied to 258 patients. (81% female), with 39.2 ± 10.2 years. Supplementation schemes observed were: MV/Ca/Fe in 14.7%, MV/Fe in 22.9%, MV/Ca in 38.4%, MV in 15.5% and no supplements 6.2%. Addition of VB12 in 4.3%. The supplements were consumed as: whole pill (75%), crushed (9.7%), half (3.5%), diluted (2.8%) and chewed (2.1%). 24.4% patients referred 1 symptom, whereas 5.4% had >1 symptom.

Conclusions: Our report shows that patients maintain the MV supplementation however; consumption of Ca, Fe VB12 is compromised. Possible reasons could be an elaborated regimen with multiple pills and the presence of symptoms. There is a need for an easier and standardized scheme to promote ideal supplementation.

O.271

PERMACOL PATCH RING IN BARIATRIC SURGERY

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Introduction: Additional restriction in bariatric surgery improves weight loss and can prevent long-term weight regain. We studied the use of Permacol patch ring for this purpose instead of silastic ring. Permacol is a crosslinked collagen implant. Permacol survives for several years in the human body, gradually replaced by own collagen.

Objectives: To study the safety and effectiveness of permacol in bariatric surgery.

Methods: Permacol ring was installed 1 cm above the gastrointestinal anastomosis (in gastric bypass patients) and around esophagogastric junction in patients with sleeve gastrectomy. The perimeter of the stomach was measured before installment and the length of permacol strip adapted to this perimeter (5.2-6.5 cm). The width was always the same – 3 cm. Then sutured edge-to-edge to form a ring around the stomach with non-absorbable 4/0 suture. Permacol ring was installed in 31 patients with gastric bypass (6 primary and 25 secondary patients with weight regain due to dilated gastroenteroanastomosis); and in 48 patients with sleeve gastrectomy (5 in primary and 43 in redo surgery in case of dilated sleeve).

Results: We started bariatric permacol in January 2013. By now, permacol ring was installed in 79 patients. The used material (Permacol) gave no adverse effects. In 4 patients the revision and removal of the suture holding the edges of permacol was required due to excessive constriction of the stomach (without the removal of permacol). The use of permacol gave additional 10-15 kg of weightloss.

Conclusion: Permacol ring can be safely used in bariatric surgery.

O.273

SPATZ ADJUSTABLE BALLOONS: RESULTS OF ADJUSTMENT FOR INTOLERANCE AND FOR WEIGHT LOSS PLATEAU

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Background: The Spatz3 Adjustable balloon system is approved for 1 year implantation and allows multiple changes in the balloon volume during the course of implantation. Other intragastric balloons are approved for 6 months and their balloon volumes remain the same for the entire 6 months of implantation.

Methods: The results of 239 patients in 7 series of Spatz balloon patients were reviewed to determine the effect of balloon volume adjustment during the 1 year course of therapy with the Spatz and Spatz3 adjustable balloons. Patient weights were measured prior to balloon volume adjustment and at extraction. Adjustments were made for intolerance or weight loss plateau.

Results: The group's mean BMI was $37.1(28.7-73)$; mean weight 102.1 kg ($71.6-210.3$); mean age 41 (19-70); 168 female and 71 males; mean balloon volume at implantation 468 ml (400-600 ml). Balloon volume adjustments were performed in 132 patients: 26 downward adjustments of a mean 170 cc (100-200) which alleviated early intolerance in all pts; 106 upward adjustments were performed as shown in the Table. 133 pts that did not undergo upward adjustment lost a mean 1.4 kg from month 5 to month 12 compared with the 8.9 kg weight lost by the adjusted group of patients. The 1 year mean wt loss for the 106 upward adjusted pts was

20.4 kg with 18.2 %wt loss and 43.4 %EWL. The 1 year mean wt loss for the non-adjusted patients was 16.4 kg with 15.2 %wt loss and 39.7 %EWL.

Conclusions: The adjustability function of the Spatz balloon serves 2 functions: alleviating early intolerance, and yielding extra weight loss for those with weight loss plateau.

O.274

EVERY BARIATRIC PROCEDURE IS REDUCED (OR SINGLE) PORT WITH THE LIVAC RETRACTOR.

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Background: Current liver retraction methods in bariatric surgery typically require a separate incision or needle-puncture, and are either attached to a frame or hand-held. All push up from the undersurface of the liver. The LiVac Retractor is a new surgical device, which uses suction to adhere the upper surface of the liver to the diaphragm without requiring additional skin incisions.

Methods: An open label, dual centre, non-randomised, study was approved by two Ethics Committees and conducted on ten patients requiring liver retraction for upper gastrointestinal surgery. Performance milestones and safety outcomes were independently recorded by Clinical Trials Coordinators and verified by Trials Monitors. The trial was supported by an Australian Federal Government grant. The LiVac Retractor was subsequently approved for use in Australia and gained CE Mark registration in 2014. Post market data has continued to verify the effectiveness and safety of the LiVac Retractor.

Results: The LiVac Retractor attained all performance milestones in the Clinical Trial with no Device Related Adverse Events. Video demonstration from the trial and from post market use will be presented, along with a summary of the trial data.

Conclusions: The LiVac Laparoscopic Liver Retraction System achieves safe and effective liver retraction without requiring additional skin incisions. The use of this retractor therefore achieves a reduced port outcome with minimal learning curve and without changing the surgeon's bariatric procedure technique.

O.277

FAST TRACK CARE IN AN UNSELECTED GROUP OF PATIENTS UNDERGOING REVISIONAL BARIATRIC SURGERY

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Background: Fast track care has proven to be safe and effective in primary bariatric procedures. It is expected that the number of more complex and risky revisional procedures will rise over the next years. The aim was to evaluate the potential benefits and safety of a fast-track protocol in an unselected group of patients undergoing revisional Roux-en-Y Gastric Bypass (rRYGB).

Methods: For this retrospective study, all patients undergoing rRYGB between January 2005 and December 2013 were included and categorized between conventional care (CC) and fast track care (FT). Patient characteristics, operative details and intra- and early postoperative complications < 30 days were analyzed.

Results: A total of 407 patients were included for analysis. 303 patients (74.4%) received peri- and postoperative treatment according to the fast track protocol. Mean age of the study population was 44.0±8.9 years, mean starting BMI was 45.7±7.0 kg/m². A total of 54 (13.3%) postoperative complications were registered (CC 19.2% vs FT 11.2%; $p = 0.038$). Both operative time (CC 135.3±42.6 minutes vs FT 79.3±29.3 minutes; $p < 0.001$) as well as hospital stay (CC 5.1±6.3 days vs FT 3.1±5.3 days; $p < 0.001$) were significantly shorter in the FT group. A multivariate analysis on postoperative complications showed that fast track was not predictive for the occurrence of complications (OR= 0.853; 95% CI [0.403-1.804]; $p = 0.677$).

Conclusions: Fast track care is safe and efficient for patients undergoing revisional Roux-en-Y gastric bypass, as it significantly decreases length of stay and operative time and does not increase postoperative complication rates.

O.278

PREDICTORS FOR POSTOPERATIVE COMPLICATIONS AFTER PRIMARY ROUX-EN-Y GASTRIC BYPASS

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Background: The risk of developing postoperative complications after primary Roux-en-Y gastric bypass (RYGB) is relatively low. Nevertheless, postoperative complications can have serious consequences in terms of severe morbidity and health care costs. Identification of potential predictors is useful for further reduction of the postoperative complication rate.

Methods: For this retrospective study on data from a prospectively collected database, all patients undergoing primary RYGB between January 2010 and December 2013 were included. Patients' characteristics, operative details and perioperative outcome were included in the current analysis.

Results: A total of 773 patients (14.5% male) were included for analysis, with a mean age of 42.1 ± 10.4 years and a mean Body Mass Index of 42.8 ± 4.3 kg/m². A total of 66 (8.5%) direct postoperative complications occurred. In 55 patients, the complications were graded as Clavien-Dindo $\geq 3a$, which were considered serious adverse events. Univariate analysis identified age over 50 ($p = 0.021$), gender ($p = 0.016$), history of smoking ($p = 0.035$), type 2 diabetes ($p = 0.027$), hypertension ($p = 0.017$) and dyslipidemia ($p = 0.025$) as potential predictors. Multivariate analysis showed that none of these variables were an independent predictor for the occurrence of postoperative complications after primary RYGB. Additional analysis identified a combination of smoking history and age over 50 as independent predictor for complications (OR 2.539; 95% CI[1.341 – 4.806]; $p = 0.004$).

Conclusions: The current study results showed no individual predictors, however older patients with a smoking history more often develop postoperative complications after primary RYGB.

O.279 MEDICAL AND PSYCHOSOCIAL PREDICTORS FOR LONG-TERM SUCCESS AFTER PRIMARY VERTICAL BANDED GASTROPLASTY

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Background: As bariatric surgery requires patients to implement permanent lifestyle changes which are affected by several non-surgical factors, pre- and postoperative psychological assessment seems to be essential for optimal weight loss and weight loss maintenance. The burden remains in identifying potential psychosocial predictors which might influence the long-term outcome. Therefore, this study was designed to identify medical and psychosocial predictors for the long-term outcome after primary Vertical-Banded Gastroplasty (VBG).

Methods: Patients undergoing primary VBG between 2001 and 2004 filled in a number of psychological questionnaires. Additional postal questionnaires were sent to retrieve the latest medical outcome. Patients were categorized as failed or successful based on their excess weight loss at last follow-up.

Results: This study identified a number of potential predictors. Failed patients showed more esthetic expectations, a more dominant character, more work absenteeism before surgery and failed patients depend more on the procedure than successful patients. Successful patients showed that positive emotions are an inhibitory factor for eating predictors and significantly less patients underwent revisional surgery.

Conclusions: This study shows a number of possible predictors, mainly found in the patient's character and the best way to prevent these predictors seems to be early recognition in the preoperative phase and a structured postoperative psychological follow-up to tackle any potential problems at an early stage.

O.284 INFLUENCE OF SLEEVE GASTRECTOMY ON PATIENTS WITH OR WITHOUT PREOPERATIVE GASTRO-ESOPHAGEAL REFLUX DISEASE: A PROSPECTIVE PH-METRY EVALUATION STUDY

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Background: Gastroesophageal Reflux Disease (GERD) is a frequent obesity-related co-morbidity which is objectively assessed by 24-h pH monitoring (24-hpHM). Some concerns have been raised of a risk for de novo or worsening GERD after Sleeve Gastrectomy (LSG). The aim of our study was to assess post operative influence of LSG on 24-hpHM in obese patients with or without preoperative GERD.

Methods: From July 2012 to September 2014, 89 consecutive patients scheduled for LSG were offered to participate to our prospective study. Seventy-six patients underwent 24-hpHM preoperatively and among them 50 patients repeated the examination 6 months after LSG. GERD was defined as % of total time spent with esophageal pH<4 $\geq 4.2\%$ (%TTpH<4).

Results: No difference was found for age (yrs), female (%) and BMI (kg/m²) between patients without (Group A) or with (Group B) GERD on preoperative 24-hpHM: 40.5 ± 10.4 vs. 46.3 ± 12.5 ($p=0.08$); 79.3% vs. 76.2% ($p=0.99$); 40.7 ± 5.5 vs. 43.3 ± 6.0 ($p=0.11$). Postoperatively, group A ($n=29$) had significant higher median (IQR) of %TTpH<4: 1.6 ($0.7-2.9$) vs. 5.6 ($2.5-9.5$) ($p<0.0001$); unlike group B ($n=21$): 7.7 ($5.2-10.3$) vs. 5.9 ($3.9-10.7$) ($p=0.30$). Twenty (69.0%) patients experienced de novo GERD on 24-hpHM ($p<0.0001$). Group A had significantly higher variation of %TTpH<4 (%): 175.8 ($78.6 - 590.0$) vs. -10 ($-63.2 - 34.6$) ($p=0.001$).

Conclusion: LSG provides high rate of de novo GERD without worsening preoperative GERD. Further long term studies are needed to better appreciate the long term effect of chronic GERD on patients undergoing LSG.

O.285 LAPAROSCOPIC GASTRIC PLICATION (LGCP) – ENTIRELY STAPLED OPERATION

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Introduction: LGCP is relatively new operation, created by imbrication (infolding/plication) of stomach wall, held in place by sutures. Operation technique requires high level of laparoscopic suturing skills, and is not easily reproducible. Hand suturing and/or the suturing material, may contribute to post-op complications.

Materials and Method: In 2013 Ethics Committee approved prospective, randomised study comparing sutured(SU) and stapled(ST) LGCP. EMS Multifeed Stapler (Ethicon Endo-Surgery) or the EndoUniversal (Covidien) were used to assess newly developed entirely stapled technique. Thirty LGCP patients were compared in ST and SU groups. Operation time, post-op nausea/vomiting, BMI, %EWL, absolute WL changes, and complications were recorded 3,6,12,18 months postoperatively.

Results: No significant pre-op difference occurred between ST and SU groups in age, gender and BMI. ST reduced significantly operation time vs SU /35min vs 48 min ($p<0.001$)/ as well as period of post-op nausea and vomiting /average 12 hrs vs 19hrs ($p<0.001$)/. At 18 months, mean BMI changed 41.9 ± 7.4 to 34.5 ± 4.1 /ST/ vs 42.6 ± 5.9 to 36.1 ± 3.6 /SU/ (not significant). %EWL was 48.5 ± 4.4 in ST vs 50.1 ± 5.2 in SU (not significant). WL was 17.3 ± 6.2 kg in ST vs 20.1 ± 8.4 kg in SU (not significant). Complications necessitating re-op were 0 (0%) in ST and in 1 (3.3%) SU.

Conclusion: Stapled LGCP is as WL effective as sutured, with significant shortening in OR time and period of nausea and vomiting. Effect of stapled LGCP on safety necessitates further and larger studies.

O.287**DIFFUSION GRADIENT OF BARIATRIC SURGERY IN UK – A 10 YEAR LONGITUDINAL COMPARATIVE STUDY****Rishi Singhal**³, Mushfique Alam¹, Shivam Bhandari¹, Jacob Matthews¹, Gavin Rudge², Paul Super³, Martin Richardson³,¹ *College of Medical & Dental Sciences, University of Birmingham, Birmingham, UK*² *Department of Public Health, Epidemiology and Biostatistics, University of Birmingham, Birmingham, UK*³ *Upper GI & Bariatric Unit, Heart of England NHS Foundation Trust, Birmingham, UK*

Background: Bariatric surgery is a relatively new innovation and is now increasingly used in the management of severe obesity. We aim to compare the uptake of bariatric surgery with regards to regional socioeconomic deprivation, using cholecystectomy as a novel baseline comparator.

Methods: Data were collected on all bariatric and cholecystectomy procedures conducted between 2003–2013 at a high volume specialist bariatric centre in the United Kingdom (UK). Index of Multiple Deprivation (IMD), a measure of socioeconomic status was obtained for each case.

Results: 6104 cases were included in the study (4221 cholecystectomies and 1883 bariatric operations). The median IMD score for laparoscopic cholecystectomy was 37.24, and did not significantly change over the study period ($p = 0.07$). There were no significant differences between the median IMD for cholecystectomy and that of the local region (37.24 vs. 37.42) Relative to cholecystectomy, the median IMD for bariatric procedures was significantly lower at 25.59 ($p<0.01$). The yearly median IMD for bariatric patients was lower than that of cholecystectomy patients ($p<0.001$ in 2005, $p=0.02$ in 2012) but increased over the study period ($p=0.05$).

Conclusions: Early uptake of bariatric surgery was from more affluent areas, with later adoption taking place in more deprived areas. However patients undergoing bariatric surgery remain significantly less deprived than those undergoing cholecystectomy. In the UK, laparoscopic cholecystectomy appears to be independent of area of residence or deprivation, and reflects the deprivation score of the local region.

O.289**ESTABLISHING VALIDITY OF A NATIONAL BARIATRIC REGISTRY - 5 YEAR COMPARISON WITH THE HOSPITAL EPISODE DATABASE****Rishi Singhal**⁴, Jacob Matthews¹, Mushfique Alam¹, Shivam Bhandari¹, David McNulty², Peter Small³, Domenico Pagano², Richard Welbourn⁵¹ *College of Medical & Dental Sciences, University of Birmingham, Birmingham, UK*² *Quality and Outcomes Research Unit, University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK*³ *Directorate of General Surgery, City Hospitals Sunderland NHS Foundation Trust, Sunderland, UK*⁴ *Upper GI & Bariatric Unit, Heart of England NHS Foundation Trust, Birmingham, UK*⁵ *Department of Upper GI & Bariatric Surgery, Musgrove Park Hospital, Taunton & Somerset NHS Foundation Trust, Taunton, UK*

Background: Bariatric surgery is the only long term solution for severe obesity. The perceived high risk nature of surgery has been a factor limiting referral and patient uptake. Like other countries, the United Kingdom has a National Bariatric Surgery Registry (NBSR); however it relies on self-reported outcomes. Published consultant reported outcomes by the NBSR indicate an in-hospital mortality rate of 0.10%. We aim to determine the mortality of bariatric surgery in England from national Hospital Episode Statistics (HES) data and thereby confirm the validity of NBSR reported outcomes.

Methods: The HES database was used to identify all patients who had undergone bariatric surgery from 2009–2014. Clinical codes were selectively used to identify all bariatric procedures but exclude operations for malignant/benign disease. In-hospital and 30-day post-discharge mortality were used as primary outcome measures.

Results: 29,825 primary bariatric procedures were carried out in the National Health Service (NHS) between 2009 and 2014. There were 28 in-hospital mortalities over the study period (0.094%; 28/29,825). The 30 day post-discharge mortality was 0.17% (52/29825). There were no significant variations in the in-hospital or 30 day mortality.

Conclusions: Despite continued growth in bariatric surgery, the overall in-hospital and 30 day mortality rate remains very low. These findings are concordant with reports from the NBSR and confirm their validity. It furthermore highlights the low risk of bariatric surgery. As such, the increased uptake of bariatric surgery within the English NHS has been safely facilitated.

O.292

SOCIOECONOMIC DEPRIVATION AND ACCESS TO BARIATRIC SURGERY - A 10 YEAR ECOLOGICAL COMPARATIVE STUDY

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Background: In the United Kingdom, bariatric surgery is provided by specialist centres. However, there is concern that despite clear eligibility guidelines, access to bariatric surgery varies between regions. We aim to compare the provision of bariatric surgery in two different UK regions and to investigate the effect of socioeconomic deprivation.

Methods: Demographic data were collected for patients resident local to each centre and underwent bariatric surgery from 2003–2013. Index of Multiple Deprivation (IMD) was used to compare socioeconomic deprivation. Local obesity prevalences were obtained from Public Health England.

Results: Data were included from 1163 bariatric cases (414 from Centre 1 and 749 from Centre 2, 77.2% female). The median BMI of patients treated at Centre 1 was higher than at Centre 2 (52.0 kg/m² vs 48.8 kg/m², $p < 0.01$). Obesity prevalences around Centre 1 were also higher ($p < 0.05$). Incidence rate ratios (IRRs) were calculated using linear models. For Centre 1, higher deprivation increased the dependence of bariatric cases on obesity prevalence (IRR 1.0019, $p < 0.001$). The effect of deprivation at Centre 2 was less (IRR 1.0009, $p < 0.001$).

Conclusions: Deprivation was found to have influenced the likelihood of receiving bariatric surgery in one region but not in another. This study provides the first statistical evidence that there may be unequal access to bariatric surgery in the UK. Further research is required to ensure that provision of bariatric surgery in the UK is evidence-based.

O.303

LONG TERM RESULTS FOLLOWING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Background: The magnitude and durability of the metabolic benefit of LAGB in Type 2 Diabetes Mellitus (T2DM) has been controversial due to limited long term medical outcome data on large numbers of patients and few surgical studies assessing impact beyond glycaemic control.

Methods: 200 patients with type 2 diabetes underwent gastric banding between 2003–2008. All patients had completed four years of follow up at the time of data collation. All patients were re-contacted in the end of 2014 (minimum 6 years follow-up) to quantify late complication rates.

Results: Mean excess %BMI loss was over 40% at all follow-up points. The mean HbA1C levels reduced from 7.9% pre-operatively to 6.7% at 4 years (HbA1c levels below WHO recommended guidelines increased from 24.3% to 62.9%). At the end of 4 years, mean arterial pressure value reduced from 101mmHg to 96mmHg. This was accompanied with an improvement in the mean triglyceride levels. 54% of patients had stopped taking insulin 4 years following gastric band insertion. The metabolic benefits of LAGB were largely independent of preoperative BMI, reduction in BMI or duration of diabetes. Overall explanation rate was 12% following 6 years of follow up.

Conclusions: LAGB significantly improved the proportion of patients achieving WHO targets for optimum control, irrespective of BMI, duration of Type 2 diabetes or insulin treatment. LAGB is a safe and effective surgical option for the control of obesity related Type 2 diabetes mellitus.

O.305**SLEEP STUDY IN BARIATRIC PATIENTS UNDERGOING OBESITY SURGERY - A CASE OF OVERKILL?****Vittal Rao**¹, John Spence¹, Joshua Kearsley¹, Zafar Zainab¹, Tressie Chapman¹, Nagammapudur Balaji¹, Chandra Cheruvu¹¹ *Department of Upper GI/Bariatric Surgery, University Hospital of North Midlands, Stoke-on-Trent***Background:** Obstructive sleep apnoea (OSA) is known to be highly prevalent in obese patients undergoing bariatric surgery. The benefit of routine OSA screening is doubtful and increases the cost of perioperative care with no definite tangible benefits.**Methods:** A retrospective review of obese patients who underwent sleep studies prior to bariatric surgery was undertaken. Outcome in terms of desaturation episodes in post operative period, admission to critical care, post operative complications and number of inpatient days was analysed. Statistical test using one way ANOVA was used.**Results:** 47 patients (M:F=24:23; mean age:47) underwent sleep studies as part of screening for OSA and were compared to 31 patients as controls (M:F=14:17; mean age:43) who did not undergo sleep studies. 31/47 patients (mean BMI: 50) were diagnosed to have sleep apnoea and were treated prior to surgery. Mean BMI of patients who were excluded to have OSA was 49.1 and those of controls was 49. All the patients underwent laparoscopic gastric bypass for morbid obesity. There was no significant difference between the three groups in terms of post operative desaturation, complications, critical care admissions or number of inpatient days (One way ANOVA).**Conclusions:** Benefit of sleep study to screen for OSA in bariatric patients and its impact on post operative outcome is not clear. There is a need for prospective RCT to identify the true clinical benefit of routine OSA screening in obese patients who undergo bariatric surgery.**O.309****5 YEARS EXPERIENCE IN SINGLE ANASTOMOSIS GASTRIC BYPASS****Hany Abu Shanab**, Ahmed Al Salman, Talal Swielm*King Abdulaziz Hospital, National Guard, Department of Surgery, P.O.Box 2477***Introduction:** Gastric by Pass surgery has been dominante (Goal) standard operation for obesity. SINGLE ANASTOMOSIS GASTRIC BYPASS now is being replacing the Roux-EN-Y gastric By Pass because of the simplicity in doing it, single anastomosis gastric bypass is a short and relatively simple procedure that has been shown by the available research to have low risk and result in good short and long-term weight loss.**Material's & Methods:** We present here a method with video presentation of how to do it. The number of cases over the last five years is 256, 219 females and 37 males. All patients were worked up for obesity and comorbidities according to our preoperative evaluation guidelines. This study demonstrates that single anastomosis gastric bypass can be regarded as a simpler and safer alternative to LRYGB (RNY gastric bypass) with similar efficacy at a 5-year experience.**Results:** All operations completed laparoscopically, Mean operative time 55 minutes (range: 35 -140 minutes), Mean intraoperative blood loss 35 ml (range: 10 - 50 mls), The average postoperative stay 2.5 days, weight loss ranges(34-83kg) over 5 years. One patient developed acute gastric dilatation and disruption of stapler line of the excluded stomach on 2nd POD. No leakage from the anastomosis or gastric tube with no mortality. Our detailed results will be presented.**Conclusion:** Single anastomosis gastric By Pass is the safe, easy to make operation for obesity and it is as effective as the traditional Gastric By Pass.**O.312****INTRAGASTRIC BALLOON STILL AN OPTION WITH EXCELLENT RESULTS (REVIEW OF 500 CASES)****Yasser F. Zidan**¹, Muthanna A. Al-Sharbaty¹, Samir I. Al-Saffar¹, Israa E. Mohammed¹*National Center of Obesity***Background:** The WHO recorded that nearly one third of people in Iraq were obese, the placement of an intragastric balloon (IGB) constitutes a short-term, effective, non-surgical intervention to lose weight.**Objectives:** This study was performed to assess the safety and effectiveness of 500 cases IGB for obese patients.**Methods:** This was a prospective clinical case series study which includes 500 patients for whom IGB (MedSil) introduced, the safety assessed for all patients while the effectiveness assessed for 400 patients who completed the treatment period.**Results:** 400 patients (337 females and 63 males), their age 14-64 (mean 37 years) underwent the procedure and their balloons removed after 4-13 months (average 7). Their weight 88-209 (average 130) The patients lose 4-76 (average 24Kg) which was equal to 5.4 – 75.8 (average 33) percent of excess weight. Their BMI reduced 0.7-21 (average 9.1) kg/m² (the percent of EBMI loss 1.5 – 112.7). The associated comorbidities improved after weight loss, and the quality of life improved in 80% of patients depending on bariatric analysis and reporting outcome systems (BAROS). We recorded 2 cases of mortality from 500 (0.1%) in extreme obesity, these mortalities were not related to the balloon itself, but to associated morbidities.**Conclusion:** Obese and morbidly obese patients can reduce their weight effectively by the simple procedure of intragastric balloon that decrease morbidity and improves the quality of their life also it made definitive surgery easier.

O.314**BANDED VERSUS NON-BANDED GASTRIC BYPASS: 434 CONSECUTIVE PATIENTS WITH MIN. 5 Y F.U.****Luc Lemmens***AZNikolaas, Sint-Niklaas, Belgium*

Background: Weight regain after a standard gastric bypass is a well-known problem in around 30 % of these patients. We started with the banded gastric bypass (BGB) in 2006.

Methods: Between June 2002 and March 2015, 1288 GB operations were performed: non-banded gastric bypass (NBGB) in 316 patients and BGB in 972 patients. We present a cohort study comparing 434 consecutive patients (280 NBGB / 154 BGB) with a minimum follow-up of 5 years.

Results: The evolution of % excess weight loss: at 1 y 73 / 76, at 2 y 74 / 78, at 3 y 71 / 78, at 4 y 69 / 77 and at 5 y 66 / 79. From the 3rd year there was a weight regain in de NBGB group which continued till the 5th year. There was none important weight regain in the banded group with the band intact. The late dysphagia was acceptable and patient appreciation was rated 'very good' in 95% of banded surgery.

Conclusions: These results show that the weight loss at 5 years is better after a BGB. There were no re-operations in the BGB group because of weight regain in 5 years against 5% in the NBGB group. Since the low percentage of band related problems (no migration in our study and only 3 bands removed) we suggest always performing a BGB which is now the policy in our bariatric centre.

O.315**EVOLUTION OF BARIATRIC SURGERY: PUZZLING MEANING. DEALING WITH BARIATRIC SURGICAL PATIENTS FOR TWENTY YEARS.****Francesco Furbetta¹***¹ Clinica Leonardo, Sovigliana (FI), Italy*

Background: Evolution of bariatric surgery reveals gastric bypass (GBP), sleeve gastrectomy (SG), mini GBP the most frequent procedures and a decline of gastric banding (LAGB). LAGB remained my conscious first choice in the context of an empowered interdisciplinary team and an advanced sequential functional gastric bypass (FGB) (LAGB as gastric partition) or gastric plication.

Methods: A strategy to deal with: 1) difficult patient; 2) a pathology outside the surgical field; 3) efficacy counterbalancing safety, reversibility, scientific progress; 4) new technical solution regardless to the business's power. October '95-february 15; 3754 bariatric operations (3075 laparoscopic adjustable gastric banding; 389 re-do; 187 functional gastric bypass; 58 gastric plication (GP); 45 others (sleeve gastrectomy (SL), standard gastric bypass (GBP), bilio-intestinal bypass); 415 associated hiatal hernia repair above pars condensa.

Results: Zero peri-operative mortality; no intensive care; follow-up rate 95%; long term EWL 46%; gastric pouch dilation-herniation 5%; erosion 1,8%; all laparoscopic procedures; second step FGB solved LAGB failures.

Conclusions: Interdisciplinary team and advanced sequential treatment are my keys to success. The evolution of new operation before long-term evaluation sounds like a new direction of bariatric surgery in the era of business that determines the same "evolution" in claims for malpractice in bariatric surgery or for aesthetic surgery. Looking closely at the "evolution" in general we must make up our mind about the real engine of this new era to get a right evaluation.

O.318**DEVELOPMENT OF A CORE OUTCOME SET FOR BARIATRIC SURGERY: THE BARIACT STUDY**

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Reviews of clinical and patient reported outcomes (PROs) after bariatric surgery show that outcome reporting is inconsistent and ill-defined and patients' views not well represented (Hopkins 2015, Coulman 2013, *Obesity Reviews*). Core Outcome Sets (COSs) - a minimum set of disease specific outcomes to be measured and reported in all studies may improve outcome reporting. This study developed a COS for bariatric surgery.

Systematic reviews identified comprehensive lists of clinical and PROs. These informed the development of a questionnaire survey. Surgeons, nurse specialists, psychologists, dietitians and patients completed the survey rating the importance of each outcome between 1 (not essential) and 9 (absolutely essential). Participants re-scored each item in second and third survey rounds with results from each stakeholder group provided (Delphi methods). Items ranked as non-essential (pre-defined criteria) were excluded after the second round. The final core set will be agreed in separate patient and professionals consensus meetings.

1088 clinical outcomes and 68 PROs created a 130 item questionnaire. 168 professionals and 90 patients completed Round 1 questionnaires and response rates in Round 2 were above 76%. Excluding non-essential items resulted in 36 and 49 retained items for professionals and patients respectively (28 overlapping). Diabetes remission, peri-operative mortality and anastomotic leak was rated highly by patients and professionals but preferences for other outcomes varied. Patients focussed on feelings of control and eating where as professionals prioritised reduction in co-morbidities and weight.

The final core outcome set for bariatric surgery will have items of importance to all stakeholders including patients.

O.320

RESULTS OF MORE THAN 15 000 PATIENTS WITH SLEEVE GASTRECTOMY - DATA ANALYSIS FROM THE QUALITY ASSURANCE STUDY OF THE SURGICAL TREATMENT OF OBESITY IN GERMANY

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Background: Laparoscopic sleeve gastrectomy (LSG) is a hype procedure in bariatric surgery currently being performed with increasing frequency worldwide. It offers an excellent weight loss and resolution of comorbidities in the short and mid-term. However, staple line leakage as the most frequent and most feared complication is still a major concern.

Methods: Since 2005 data from obese patients undergoing bariatric procedures in Germany are prospectively registered in an online database and analyzed at the Institute of Quality Assurance in Surgical Medicine. For the current analysis all patients who had undergone primary sleeve gastrectomy for morbid obesity within a seven-year period were considered.

Results: Using the German Bariatric Surgery Registry, data from 15,000 LSGs were considered for analysis. Staple line leak rate decreased during the study period from 6.5 to 1.4 %. Male gender, higher BMI, concomitant sleep apnea, conversion to laparotomy, longer operation time, use of both buttresses and oversewing and the occurrence of intraoperative complications were associated with a significantly higher leakage rate. On multivariable analysis, operation time and year of procedure only had a significant impact on staple line leak rate.

Conclusion: Due to the growing experience a constant decrease in the leak rate after LSG is being observed. However, staple line disruption may still lead to abdominal sepsis, multiorgan failure and increased mortality in young patients with a benign condition. The results of the current study demonstrated that there are factors that increase the risk of leakage and which would enable surgeons to define risk groups, to select patients more carefully and to offer closer follow-up during the postoperative course with early recognition and adequate treatment. All future efforts should be focused on a further reduction of serious complications to make LSG a widely accepted and safer procedure.

Key words: Bariatric Surgery – Sleeve Gastrectomy – German multicenter trial – gender specific aspects – influence of staple line buttresses - leakage

O.321

PRETERM DELIVERY FOLLOWING BARIATRIC SURGERY: A META-ANALYSIS

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Background: The most effective treatments available for obesity are surgical interventions. A majority of those having bariatric surgery are women of childbearing age. Recent studies have claimed an increased risk of preterm delivery in women who have had bariatric surgery, although the statistical significance is questionable.

Methods: A literature review was conducted in six databases with eight search terms. The dates included were 1980 to 2014. Over 14,000 articles were returned by the searches, and 20 were selected for inclusion. A meta-analysis was completed with two reviewers assessing articles, and data subject to double entry.

Results: Women with bariatric surgery have a higher risk of preterm delivery when compared to the general obstetric population (RR 1.44, 95% CI, 1.29 to 1.61, P < 0.00001). The risk is not significantly decreased when general bariatric patients are compared to obese controls (RR 1.02, 95% CI, 0.73 to 1.42, P < 0.93). Subgroup analyses were performed on women with laparoscopic adjustable gastric banding (LAGB) and women with roux en Y gastric bypass (RYGB) showing higher risk for preterm delivery in the LAGB population.

Conclusions: Bariatric surgery does increase the risk of preterm delivery in groups that contain all surgeries. Women with a history of LAGB have an increased risk of preterm delivery regardless of the comparison group, while women with a history of RYGB do not have a significantly increased risk of preterm delivery.

O.337**BANDING IS A SAFE ADJUNCT TO SLEEVE GASTRECTOMY.****Harsha Chandraratna**¹, Steve Watson¹, Chris Couch², Jo Climo³¹ *St John of God Hospital, Perth, Australia*² *Waikiki Private Hospital, Perth, Australia*³ *Obesity Surgery WA, Perth Australia*

Background: Restrictive banding as an adjunct to Bariatric Surgery has been used since 1989. Initially in Banded Gastric Bypass, for which the data consistently confirmed that banding resulted in better long term weight loss by preventing stretching of the pouch and the stoma. This concept was transferred to Sleeve Gastrectomy in 2009 and early series showed that banding sleeve gastrectomy was safe and durable with the idea of preventing late weight regain by reducing stretch and dilatation of the sleeve. This review studies the safety aspects of inserting a non-adjustable MiniMizer Ring as an adjunct to Sleeve Gastrectomy.

Methods: The placement of a MiniMizer Ring was offered to our patients from September 2013 to Feb 2015 (18months) and the rationale for the Minimizer Ring was explained. 251 agreed to have a MiniMizer Ring

Results: Patient Demographics: Age 21-72, Female (78%), Seamgaurd Used (98%), Bougie Size – 36 (0%)/38(0%)/40(0%), The Sleeve Gastrectomy was created with the Covidien Tristapler using a combination of black and purple cartridges. The Minimizer Ring Closure position 6,5cm(0%) 7,0cm (1.2%), 7,5cm (13.9%), 8,0cm (84.9%), The ring was placed un-sutured in all but the first three cases. The ring was well tolerated. There were no complications relating to the ring insertions, specifically no bleeding or perforation. Four MiniMizer rings were subsequently removed, non of these were reasons directly relating to the ring, in each case the surgeon had returned for a different procedure in patients that were struggling post operatively and felt that the ring should be removed to eliminate a potential source of problem.

Conclusions: Of 251 MiniMizer rings placed there were no major or minor complications, the technique described is safe, the product is safe and easy to use. The ring was removed in (1.6 %) but of these none were due to a ring indication.

O.342**30-DAY EMERGENCY VISITS AND READMISSION AFTER BARIATRIC SURGERY IN A HIGH VOLUME CENTER****Rodrigo Munoz**¹, Erik Manríquez¹, Rodrigo Tejos², Alejandro Rojas², Ricardo Funke¹, Camilo Boza¹, Fernando Crovari¹.¹ *Department of Digestive Surgery, Pontificia Universidad Católica de Chile, School of Medicine.*² *School of Medicine, Pontificia Universidad Católica de Chile.*

Background: Hospital readmissions have become an important surrogate to measure quality of patient care. The aim of this study was to evaluate 30-day emergency department (ED) visits and readmission rates after bariatric surgery.

Methods: We retrospectively reviewed all patients who underwent Roux-en-y gastric bypass (RYGB) or Sleeve Gastrectomy (SG) during two periods 2006-2007 and 2012-2013. ED visits and readmission for these patients were identified within the hospital database for the first 30 days after discharge from index operation.

Results: We identified a total of 1146 patients, 73% were females with an average age of 36.8±11.7 years and a BMI of 37.5±5.5 kg/m². A total of 613 and 533 patients underwent RYGB and SG, respectively. The overall 30-day ED visit and readmission rate was 7.9% (91 patients) and 3.5% (41 patients), respectively. While no differences was observed in ED visit rate after RYGB and SG (9.1 vs 6.6%,p>0.05), readmission rate was higher after RYGB (4.9 vs 2.3%,p<0.05). Readmitted patients were predominantly females 78%, had longer surgical time, length of hospitalization, and more comorbidities. Readmitted RYGB-operated patients underwent surgery/endoscopic intervention more frequently than SG patients (2.3 vs 0.2%,p<0.05). No differences were seen in ED visits, readmission, and reoperation between analyzed periods.

Conclusions: Readmission is more commonly seen after RYGB than after SG. Only a small proportion of readmitted patients, most commonly RYGB-operated patients will require endoscopic/surgical intervention, while the majority will undergo conservative management.

O.345**SLEEVE AND BYPASS EQUALLY EFFECTIVE UP TO THREE YEARS. RESULTS OF THE PRT SWISS MULTICENTRE BYPASS OR SLEEVE STUDY (SM-BOSS)****Ralph Peterli**¹, Bettina Wölnerhanssen², Diana Vetter³, Dino Kröll⁴, Philipp Nett⁴, Yves Borbély⁴, Beatrice Kern¹, Markus Gass¹, Thomas Peters¹, Martin Thurnheer⁵, Bernd Schultes⁵, Marco Bueter³¹ *Departments of Surgery and Internal Medicine, St. Claraspital, Basel Switzerland*² *Department of Biomedicine, University of Basel, Switzerland*³ *Department of Visceral and Transplantation Surgery, University Hospital Zürich Switzerland*⁴ *Department of Surgery and Medicine, University Hospital, Bern Switzerland*⁵ *eSwiss Medical and Surgical Center, St. Gallen Switzerland*

Background: Laparoscopic Sleeve Gastrectomy (LSG) is performed almost as often in Europe as laparoscopic Roux-Y- Gastric Bypass (LRYGB). We present the 3-year results of this randomized clinical trial comparing the two procedures.

Methods: Initially 217 patients (LSG, n=107; LRYGB, n=110) were randomized to receive either LSG or LRYGB at four bariatric centres in Switzerland. Mean BMI of all patients was $44 \pm 11 \text{ kg/m}^2$, mean age was 43 ± 5.3 years, and 72% of patients were female. Minimal follow-up was three years with a rate of 94% and 92% at two and three years after surgery, respectively. Both groups were compared for weight loss, co-morbidities, quality of life according to GIQLI and BAROS score, and complications.

Results: Excessive BMI loss was similar between LSG and LRYGB at each time point (one year: $72 \pm 22\%$ vs $77 \pm 21\%$, $p=0.2$; two years: $72 \pm 25\%$ vs $77 \pm 23\%$, $p=0.2$; three years: $69 \pm 24\%$ vs $74 \pm 21\%$, $p=0.1$). Prevalence of comorbidities was significantly reduced after both procedures except for GERD, which showed a higher resolution rate after LRYGB. Quality of life increased significantly in both groups after one and three years post surgery. Within three years of follow-up there was no difference in number of complications treated by reoperation (LSG, n=7; LRYGB, n=12, $p=0.3$) and number of complications treated conservatively: peptic ulcer (LSG, n=0; LRYGB, n=1), stricture (LSG, n=0; LRYGB, n=1), kidney stones (LSG, n=2; LRYGB, n=1), micronutrient deficiencies (LSG, n=86; LRYGB, n=92).

Conclusions: LSG and LRYGB are equally efficient regarding weight loss, improvement of comorbidities, quality of life, and complications up to 3 years after surgery.

O.350 PRELIMINARY DATA COMPARING GUT HORMONE PHYSIOLOGICAL CHANGES BEFORE AND AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY IN MORBIDLY OBESE DIABETIC INDIAN PATIENTS.

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Introduction: We propose to analyze and attempt to understand the gut physiology and its metabolic alteration in Type 2 Diabetes Mellitus (T2DM) after Laparoscopic / Robotic Sleeve Gastrectomy (SG).

Objectives: 1. To evaluate the gut metabolic alterations in Indian Diabetic patients undergoing SG; 2. To correlate with the improvement in the anthropometric, diabetic indices and co-morbid conditions leading to betterment of quality of life indices

Methods: This is a prospective study being conducted in Sir Ganga Ram Hospital, New Delhi, India after IRB approval. Prospectively enrolled patients having BMI $\geq 32.5 \text{ Kg/m}^2$ with T2DM underwent Standardized SG. Baseline levels of Glucose, Insulin, C-Peptide were measured in Fasting (F) and Postprandial (PP) states. HbA1C levels are evaluated and HOMA-IR index calculated. Baseline fasting and PP levels of GHRELIN, GLP-1 & PYY are evaluated.

Results: A total of 32 patients have been enrolled in study thus far. The preliminary results show a significant decrease in BMI and a significant ($p > 0.001$) correlation is found between fasting blood glucose-, insulin-levels with HbA1c. Furthermore, C-peptide decreases significantly within 1 month but increases as expected by 1 year. Also, as levels of Ghrelin decrease, GLP1 was observed to increase and PYY1 was also observed to decrease over a period of 6 months. Further Gut hormone data analysis is under process.

Conclusions: Our preliminary data shows that SG even though traditionally believed to be a restrictive procedure, does lead to metabolic alterations by producing changes in the gut hormones and resetting the deranged Gut- Endocrine Axis.

O.360 ACHIEVING THE "MINIMAL SCARRING CONCEPT" IN BARIATRIC SURGERY

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Enormous attention has been taken in recent years to improve scarring following laparoscopic surgery. The aim of single incision laparoscopic surgery (SILS) and natural orifice transluminal endoscopic surgery (NOTES) has been to perform operations with minimal or no visible scars. However, besides the inherited difficulties associated with these techniques, their advantages in the bariatric field should be questioned especially given the additional body contouring procedures that may be needed later. In particular, SILS has the potential to injure the umbilicus vascular pedicle needed for later reconstruction.

We propose an alternative to SILS and NOTES for laparoscopic sleeve gastrectomy (LSG) and bariatric surgery. It is a simple modification to the standard trocar positioning that offers minimal post-operative scarring but also takes in consideration future abdominoplasty plans.

The principle behind the technique is to perform LSG with 4 ports and to place 3 of them; surgeon's left hand, camera, and liver retraction at the lower abdomen panniculus, below and away from the umbilicus. Seventy-two patients underwent LSG using this method. The technique, its rational and immediate outcome of this cohort are presented.

O.362 SYSTEMATIC REVIEW AND META-ANALYSIS OF MEDIUM-TERM OUTCOMES AFTER BANDED ROUX-EN-Y GASTRIC BYPASS

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Background: This is the first systematic review and meta-analysis focused exclusively on intermediate-term outcomes for the *banded Roux-en-Y gastric bypass (B-RYGB)*.

Methods: B-RYGB articles published from 1990–2013 were identified through MEDLINE, ScienceDirect, and SpringerLink databases augmented by manual reference review. Articles were assigned an evidence level (Oxford UK Centre for Evidence-Based Medicine criteria) and Jadad quality score (randomized controlled trials). Simple and weighted means (95% CI) for excess weight loss (EWL) at follow-up (1–10+ years) were calculated. At 5 years, a pooled estimate for BMI (kg/m²) change (weighted mean difference and 95% CI) for banded bypass patients was computed. Rates for weighted mean complications, non-band- and band-related reoperations, and overall comorbidity resolution were calculated.

Results: 321 articles were identified: 286 failed inclusion criteria (i.e., non-English, B-RYGB unrelated, <10 per arm, <3-year follow-up), leaving 35 articles. Manual review added 10 potentially relevant articles; 30 that failed inclusion criteria were excluded, leaving 15 for analysis. B-RYGB was performed on 8,707 patients: 79.0% female, mean age 38.7, BMI, 47.6 (41.0–59.4). Overall BMI weighted mean difference (reduction) at 5 years was 17.8 (95% CI 12.8, 22.7; $p < 0.001$). Five-year weighted mean EWL of 72.5% (67.5, 77.4) was sustained at 10+ years (69.4%: 58.9, 80.0). Weighted mean complication rates: early, 10.9%; late, 20.0%. Non-band-related reoperation rate, 15.2%, band-specific reoperation rate, 4.1%. Gastric outlet stenosis, 2.8%, band erosion 2.3%, band slippage 1.5%. Diabetes remitted in 80/95 (84.2%).

Conclusions: By systematic review and meta-analysis, albeit with limited rates of follow-up, banded Roux-en-Y gastric bypass appeared to result in significant, sustained excess weight loss of approximately 70.0% out to 10 years.

O.364

RARE NEUROLOGIC COMPLICATION AFTER SLEEVE GASTRECTOMY

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Background: Bariatric surgery is the most effective solution to fight against the epidemic of morbid obesity and type II diabetes; however peripheral and central neurological complications can occur after this type of surgery, more often after bypass surgery but rarely after sleeve gastrectomy (SG).

Methods: This is a retrospective study of 430 SG between January 2013 and December 2014 in order to identify patients who have had neurological complications.

Results: In 2 years, 430 SG were realized, 5 (1.16%) had neurological complications. All patients had uneventful postoperative course, but all reported feeding difficulties, accompanied by severe dysphagia, rapid weight loss with a mean of 35 kg (30–40 kg) during the first 3 postoperative months. All patients were readmitted due to their neurological symptoms that included paresthesia, abolition of the deep tendon reflexes of the lower limbs, muscle pain, motor and sensitive deficits in some cases and in one case a Wernicke encephalopathy. All patients were treated vitamin B deficiency neuropathy and have had a significant improvement and /or disappearance of their symptoms.

Conclusions: Neurological complications after SG are rare and are often preceded by gastrointestinal symptoms, rapid weight loss and a lack of vitamin supplementation. Re-hospitalization and multidisciplinary team management (surgery, endocrinology, neurology and physiotherapy) are crucial to make the diagnosis and initiate treatment.

O.367

PREDICTIVE FACTORS FOR SUCCESSFUL BARIATRIC SURGERY, QUALITY OF LIFE AND PHYSICAL ACTIVITY AFTER TWO YEARS

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Background: The aim of this study was to identify predictive factors for achieving the best weight loss and to evaluate its relationship with quality of life and physical activity.

Methods: In a cohort of primary procedures in 2012 a group of 200 patients were identified with the best and the worst weight loss after two years. Included for predictive factors were patients' characteristics, psychological questionnaires and perioperative details. Used for quality of life (QoL) assessment was the RAND36 and metabolic equivalent of task to assess activity.

Results: Mean Total Body Weight Loss (%TWL) of the best performers (n=100) was 43.2% (± 5.0) and worst performers (n=100) of 20.8% (± 5.3). Mean age was significantly lower in the best performers (39.0 years (± 11) vs 43.4 years (± 12.6); $p < 0.001$). Self-reported pre-existing knowledge about the procedures was significantly related with better outcome ($p = 0.027$). Not any other clinically relevant psychological factor was identified. QoL improved significantly in both groups with a tendency for the physical and emotional role in

the best performers. Sleeve Gastrectomy was performed in 40% of best performers and 71% of worst performers ($p < 0.001$). The other patients underwent Roux-en-Y gastric bypass. Perioperative complications, postoperative complications, physical activity and a preliminary phase did not predict %TWL.

Conclusions: No psychological factors were identified clinically relevant related to better outcome. Age and surgical technique are predictive for the amount of %TWL in this study. Improvement in QoL and physical activity was not related whether the patient had the highest or lowest %TWL.

O.373

TOTALLY ROBOTIC ROUX-EN-Y GASTRIC BYPASS (TR-RYGB) FOR SUPER OBESITY

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Background: Laparoscopic RYGB for the superobese is a technically challenging operation due, in part, to increased torque and a reduced visual field. The robotic platform system with its 3-D vision, intuitive motion, enhanced dexterity and ergonomic advantages may reduce surgical risks of super obesity. In this study, we have assessed surgical risks and outcomes of TR-RYGB in a large series of superobese patients.

Methods: The study population included 1,231 TR-RYGB patients: 490 (39.8%) superobese (BMI ≥ 50) and 741 (60.2%) non-superobese (BMI < 50). Measures included: operative time, intraoperative complications/conversions, length of hospital stay (LOS), in-hospital complications/reoperations, 30-day readmissions, 30-day mortality, and total % change BMI (6, 12, 24, 36 months).

Results: We found that total surgery times were longer ($p < 0.01$) for the superobese vs. non-superobese patients (126.8 vs. 121.8 min, respectively), but that intraoperative complications (2 each) and conversions (1 each) were comparable and, for all the TR-RYGB patients, exceptionally low. Total LOS did not differ significantly between the obesity groups nor did in-hospital complications/reoperations, 30-day readmissions, or mortality ($n=1$ for superobese, $n=2$ for non-superobese). Furthermore, among 1,231 TR-RYGB patients, only one anastomotic leak (0.08%) occurred (non-superobese). Total % changes in BMI were significantly greater ($p < 0.01$) for the superobese than non-superobese at postoperative months 12 and 24.

Conclusions: The superobese have no higher morbidity and mortality risks with TR-RYGB than do their less obese counterparts and all TR-RYGB patients experienced exceptionally low rates of intraoperative complications and anastomotic leaks.

O.374

BARIATRIC SURGERY, ONE OF THE SOLUTIONS FOR GLOBAL WARMING?

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Background: Two main global problems, seemingly far apart, are obesity and global warming. One of the only long term solutions for morbid obesity is bariatric surgery. The carbon dioxide (CO₂) emission by humans depends on their weight, specified in kilograms (kg), the higher the body weight, the higher the resting metabolic rate causing a rise in the CO₂ emission. The major causative agent of global warming are the greenhouse gases, which consists mainly of CO₂. With a mean excess weight loss of 50 percent, it could be hypothesized that bariatric surgery contributes as one of the solutions for global warming.

Methods: A single center consecutive electronic database of patients undergoing primary laparoscopic Roux en Y gastric bypass (LRYGB) or laparoscopic sleeve gastrectomy (LSG) from 2007 onwards was retrospectively reviewed, with a mean follow up of 12 months. The mean weight loss was calculated and consequently the mean decrease of CO₂ emission, using the 'Gryka' formula.

Results: A total 983 patients were included, 910 underwent LRYGB and 73 LSG. The mean weight loss after six months and one year was 30.6 and 37.0 kg respectively. In one patient the decrease of CO₂ emission is 63.878 liters annually with this weight loss. In this six year cohort, the CO₂ emission decreases with 62,739,074 liters in one year.

Conclusion: On a yearly basis, bariatric surgery contributes significantly to the reduction of the CO₂ emission and can be regarded as one of the solutions for global warming.

O.377

MANAGEMENT OF COMPLICATIONS OF REVISIONAL BARIATRIC SURGERY (RBS): 3 YEARS EXPERIENCE OF A BARIATRIC CENTRE OF EXCELLENCE.

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Background: Laparoscopic RBS is rapidly increasing nowadays. A tailored decision making process is advocated. The aim of the study was to analyze the perioperative complications after RBS at a high-volume bariatric center and provide insight into the management options.

Methods: A retrospective analysis of prospective database (last 3 years). 74 out of 614 patients (12%) underwent laparoscopic RBS. The indications were: inadequate weight loss (56 patients, 75.7%) and procedure related complications (18 patients, 24.3%). The aim of the RBS was providing a second surgical option in 55 patients (74.3%) and revision of the existing anatomy in 19 patients (25.7%).

Results: 43 patients (58%) underwent 2 stage laparoscopic sleeve gastrectomy (LSG) after band removal; 12 patients (16.2%) underwent hiatal hernia repair after LSG, 5 patients (6.7%) had revised LSG. 12 patients underwent Roux-en-Y gastric bypass: after vertical gastropasty (6.7%), LSG (5.4%), band (2.7%), gastric placcation (1.35%). One patient underwent refashioning of gastrojejunostomy and another underwent removal of the excluded stomach due to acute bleeding. No mortalities or conversion occurred. 7 major complications (9.4%) were observed (4 leaks and 3 intra-abdominal haematomas). One long term complication (leakage followed by esophago-bronchial fistula) was reported. The treatment was conservative in 5 cases (endoscopy stenting, interventional radiology, TPN) and laparoscopically in 3 cases. The mean time for complication resolution was 76.6 days.

Conclusions: RBS needs multidisciplinary patient selection, well equipped centers and experienced surgeons. Complications of RBS are higher than primary surgery but can be managed conservatively in the majority of cases.

O.387 STOMA SIZE AND ROUX-LIMB VOLUME ARE NOT CRITICAL FACTORS FOR WEIGHT REGAIN OR INADEQUATE WEIGHT LOSS AFTER ROUX-EN-Y GASTRIC BYPASS

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Background: Roux-en-Y gastric bypass (RYGB) is the most commonly performed and successful bariatric procedure worldwide. However, it is reported that 15%-25% of patients fail to lose adequate weight or ultimately regain weight. Potential causes of suboptimal outcomes after RYGB are diverse and include anatomic, demographic, and psychosocial factors. The aim of this study is to evaluate the correlation of anatomical changes after RYGB with unsuccessful weight loss outcomes.

Methods: This retrospective study was conducted in an academic center. Patients with inadequate weight loss who underwent upper endoscopy (UE) from March 2013 to February 2015 were identified. Data collected included patient demographics and weight. Inadequate weight loss was defined as excess weight loss (EWL) < 50%. The stoma size at UE (diameter and area), and the first 20 cm of the alimentary Roux limb volume (calculated by 3D multi-slice computed tomography) were performed to correlate the anatomical changes after RYGB with inadequate weight loss.

Results: We identified and analyzed 45 patients with inadequate weight loss after RYGB. The cohort had a male-to-female ratio of 1:2.7, mean age of 51.2 ± 9.3 years, and mean BMI at the time of inadequate weight loss diagnosis of 38.4 ± 3.9 kg/m² (range, 33.6-48.1). The interval from RYGB to diagnosis was 4.5 ± 4.9 years (range, 0.7 – 13.2), and mean interval to UE examination 7.6 ± 2.0 years (range, 4.1-14.3). The mean gastro-jejunal stoma diameter and area observed at the UE were 2.1 ± 0.6 cm and 3.2 ± 1.9 cm², respectively. The linear regression analysis showed positive correlation (r=0.23), but not significant (p=0.2), between the gastro-jejunal stoma area and %EWL (95% CI: -0.64, 2.37). In a subgroup of patients (n=25), the 3D multi-slice computed tomography showed a mean volume of 93.3 ± 32.0 cm³ in the alimentary Roux-limb (first 20 cm), and 34.0 ± 22.4 cm³ of the proximal jejunal limb. The linear regression model showed no significant correlation (r=-0.12, p=0.5) between the alimentary Roux-limb volume and the %EWL (95% CI -0.64, 2.37), and between the alimentary Roux-limb volume vs gastro-jejunal stoma area (r=0.1, p=0.09; 95% CI: -0.003, 0.04).

Conclusion: The results of our study suggest that gastro-jejunal stoma size and Roux-limb volume are not critical factors influencing weight regain or inadequate weight loss after Roux-en-Y gastric bypass. Our regression model failed to identify any significant correlations.

O.404 LIGHTS AND SHADOWS ON LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG): MID AND LONG TERM RESULTS

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Background: LSG gained popularity as a stand-alone procedure, even in a two-step approach. Effectiveness on weight loss and comorbidities resolution at mid-term is well known, although in the long run results are still scanty. The aim of this study is to assess mid and long-term results of LSG in terms of weight loss and comorbidities improvement.

Methods: 107 obese patients underwent LSG from February 2005 to February 2010. Mean BMI, mean %EBL, improvement of hypertension (HT), type 2 diabetes mellitus (T2DM), dyslipidemia, obstructive sleep apnea syndrome (OSAS) and gastro-esophageal reflux disease (GERD) were analysed. Those patients submitted to duodenal switch (DS), total gastrectomy, gastric bypass, fundectomy and jatooplasty only for GERD, died or dropped out were excluded.

Results: Exact McNemar significance probability was not significant (p<0.05) in term of improvement of HT, dyslipidemia, GERD and T2DM at 5- to 10-year follow-up. OSAS was highly improved at 5-year follow-up (p=0.002, 16.3% at 5-year vs 34.5% at surgery time)

and 6-year follow-up ($p=0.002$, 2% at 6-year vs 36% at surgery time), but not later. Mean BMI and %EBL peaked at 7-year follow-up (36 ± 8 and 38 ± 45 kg/m², respectively).

Conclusion: In our series only OSAS showed a significant improvement at long term follow-up, while %EBL was not that satisfactory, according to Reinhold's criteria. The small sample size due to drop out and exclusion criteria probably influenced results.

O.405 SINGLE-STEP CONVERSION OF GASTRIC BANDING TO LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IS SAFE AND FAVORABLE TO THE PATIENT: A SINGLE CENTER STUDY OF 784 PATIENTS

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Aims: To achieve additional weight loss or to resolve band-related problems, a laparoscopic adjustable gastric banding (LAGB) can be converted to laparoscopic Roux-en-Y gastric bypass (RYGB). With this study the outcome in terms of the early mortality and morbidity is determined and the safety of a single-step procedure compared with a two-step procedure is evaluated.

Methods: A prospectively maintained database from October 2004 to December 2014 was retrospectively reviewed. Of the 1030 patients who previously underwent a gastric banding, only the patients with the band still in place (N=784) were included. Either a single-step procedure (LAGB removal combined with RYGB) or a two-step procedure (LAGB removal followed by LRYGB in a second procedure) was performed.

Results: In 639 patients (81.5%) a single-step procedure was performed. From 2011 on, this single-step procedure was achieved in 93.9%. No mortality or anastomotic leakage was observed. Only 43 patients (5.5%) had a 30-day complication: most commonly hemorrhage (N=22/43). There was no significant difference in complications between the single-step and two-step group of patients. A comparison of a small sample of both groups of patients reveals that the one-step approach is favorable in terms of hospital stay and costs, compared to the two-step approach.

Conclusion: Converting a LAGB to RYGB can be performed with a very low morbidity and zero-mortality in a high-volume revisional bariatric center. These excellent results can be explained by the full-standardized surgical technique, the meticulous dissection and construction of the gastric pouch and the gastro-enterostomy, and the tailored approach for a one or two-step procedure. During the studied period, there was a significant increase in performing the conversion from LAGB to RYGB single-staged, according to an important learning curve, without an influence on the complication rate. We can conclude that in experienced hands, the one-step approach is safe and feasible, and the preferred surgical strategy in terms of costs and hospital stay, compared to the two-step conversion to RYGB.

O.406 THE INFLUENCE OF FLUID VOLUME TRANSFUSED PERIOPERATIVELY ON THE RISK OF RHABDOMYOLYSIS AFTER BARIATRIC SURGERY.

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Introduction: The number of bariatric surgeries performed in Poland increases every year. More frequently appearing reports of negative consequence of rhabdomyolysis as a postoperative complication in bariatricly treated patients prompted us to undertake a research. Its goal was to evaluate the relation between the volume of fluid administered intravenously in the perioperative and the development of rhabdomyolysis.

Materials and Methods: The study involved 198 patients treated in 2nd Department Of Surgery, who underwent LSG or LRYGB due to morbid obesity.

Results: Biochemical rhabdomyolysis was defined as the level of creatine phosphokinase (CPK) greater than 1000 U/l, found in 30 patients (15,15%). Clinical rhabdomyolysis, presenting with musculoskeletal pain, developed in 6 patients (3%). In the group of patients who developed rhabdomyolysis, the median volume of fluids administered during the surgery and the first 24h was 5500 ml, whereas among the patients without this complication it was 4000 ml. U Mann - Whitney test showed a statistically significant difference in the medians in both groups. Using a linear regression model, a relationship was determined between the volume of fluids administered intravenously, and the increase in CPK levels. And so, each transfusion of 500 ml above the median transfused fluid volume increases CPK in the first postoperative day by 240 U / L.

Conclusion: Patients who are treated bariatricly don't require excessive intravenous fluid administration in the perioperative period. Furthermore, a too high volume increases the risk of developing rhabdomyolysis.

O.409 PARITY ACHIEVED IN PRIMARY INFERTILITY AFTER POSE PROCEDURE

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Background: Although most understand the impact obesity has on cardiovascular and metabolic health, the role it plays in infertility is sometimes under-appreciated. A BMI of 35 reduces fertility by 26% as compared to non-obese women. We report on 2 infertile patients who achieved their first healthy childbirths after an incisionless weight loss procedure (pose).

Methods: Retrospective case review of 2 nulliparous patients who became pregnant post-pose. Information obtained from office notes/follow-up visits/phone calls. Both gave consent.

Patient 1 was a G₂P₀ 41y.o. presenting for pose as infertility treatment. After 2 miscarriages before age 34, underwent 11 unsuccessful IVFs at 4 clinics over 8 years, gaining 25Kg. **Patient 2** was a G₂P₀ 29 y. o. who had been attempting a term pregnancy X 4 years. History of oligomenorrhea and PCOD but no infertility treatments.

Results: **Patient 1:** Baseline BMI 32. 6 months post-pose, lost >20% of TBW (BMI 25.5). Then, underwent first successful in-vitro fertilization resulting in full term pregnancy and first live birth.

Patient 2: Baseline BMI 39.5. At 7 months post-pose, lost 19.1% of TBW (BMI 33). Achieved 2 natural pregnancies post-pose (at 7 and 24 months). First pregnancy complicated by placental dysfunction, but delivered healthy child at 42 weeks. Second pregnancy was uneventful (delivery 37 weeks), gaining only 6.5Kg.

Conclusions: Obesity can alter fertility and negatively impact quality of life. Pose offers a less invasive weight loss option with potential to improve fertility/QOL in the right patient. Controlled studies looking at infertility are necessary to validate pose as adjunct therapy.

O.411

REVISIONAL BARIATRIC SURGERY: A MANAGEMENT ALGORITHM FOR PATIENTS AFTER FAILED GASTRIC BYPASS

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Background: Bariatric surgery is increasingly used to deal with obesity worldwide. Of all bariatric procedures described, laparoscopic Roux-en-Y gastric bypass (RYGB) is considered by some to be the gold standard in the morbidly obese. Weight regain after RYGB is reported, with factors including pouch dilatation being thought to be responsible. In these cases, revisional surgery can be the only solution.

Material and methods: An expert panel discussed the issue of failed primary bypass surgery and its appropriate management, and developed a proposed management algorithm for failed RYGB, according to the current reviewed literature and evidence based medicine. We describe herein our own experience concerning failed RYGB in a sample of our revisional bariatric cases.

Results: Although there is limited outcome data on revisional bariatric surgery, there is evidence that laparoscopic adjustable gastric banding (LAGB) or laparoscopic distalization of the alimentary limb, are valid options as revisional procedure, with an acceptably low morbidity and mortality rate. We focus in this presentation on the operative approach and technique to decide which patient will benefit most of which strategy.

Conclusion: In tailored cases and with appropriate training of the surgeon, banded RYGB or laparoscopic distalization of the alimentary limb are technically safe and straightforward strategies to apply for revisional bariatric surgery, with good results in terms of weight loss.

O.423

CHANGES IN QUALITY OF LIFE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY, ADJUSTABLE GASTRIC BANDING AND ROUX-EN-Y GASTRIC BYPASS IN YOUNG PATIENTS.

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Background: The beneficial effects of bariatric surgery in adolescents and young morbidly obese patients are nowadays well known. Excess weight loss of 60 to 70% and remission of obesity related comorbidities is achieved. However, it is unclear whether health-related quality of life (HR-QoL) is sustained in morbidly obese young adults who underwent sleeve gastrectomy (SG), adjustable gastric banding (AGB) or Roux-en-Y gastric bypass (RYGB). This study evaluates the quality of life, biometrical outcomes and safety of bariatric surgery in young adults.

Methods: Data analysis of 150 young bariatric patients (≤25 years-old) who underwent bariatric surgery was performed through HR-QoL questionnaires (e.g. SF-36, IWQOL-LITE, BAROS). Minimal follow-up had to be at least 12 months. Also weight loss and adverse event rates were collected in this period.

Results: Data is now being collected and analyzed. Preliminary data showed that short-term complications were lower for LSG compared to RYGB. Significantly more excess weight loss was achieved in RYGB and LSG patients compared to patients that underwent an AGB. HR-QoL was found less improved after AGB and RYGB compared to LSG.

Conclusions: Preliminary results showed that LSG is a better technique for not only weight reduction, but also in HR-QoL improvement in young patients. At time of the IFSO congress in Vienna we are able to present the final results of this study.

O.427**LAPAROSCOPIC SLEEVE GASTRECTOMY AS A TREATMENT FOR MORBIDLY OBESE PATIENTS PRIOR TO WAITLISTING FOR KIDNEY TRANSPLANTATION**

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Background: The prevalence of obesity and obesity related morbidity in end-stage renal disease patients is rising. While it is established that obesity does not negatively influence the benefit achieved through transplantation with respect to lower long-term mortality and cardiovascular risk, obesity is associated with increased graft failure, delayed graft function, surgical site infection, prolonged hospital stay and costs.

Methods: We herein report a two step approach for morbidly obese renal transplant candidates. Patients with end-stage renal disease and a BMI of 35kg/m² or higher underwent laparoscopic sleeve gastrectomy. After sustained weight loss and a BMI of less than 35kg/m², patients were waitlisted for kidney transplantation.

Results: Laparoscopic sleeve gastrectomy was performed in 7 morbidly obese renal transplant candidates with a mean BMI of 38.6 kg/m². BMI dropped below 35kg/m² within a median of 3 months. Excess body mass index loss (EBMIL) was 67.6% at 1 year after the bariatric procedure. Within a mean of 18 months from bariatric surgery 5 patients underwent successful kidney transplantation with good renal function and a serum creatinine of 1.9 ± 0.9mg/dl at discharge. Two patients are waitlisted for transplantation.

Conclusions: Laparoscopic sleeve gastrectomy may be a safe and efficacious weight reduction strategy in morbidly obese renal transplant candidates. Rapid weight loss and subsequent waitlisting for kidney transplantation may reduce the overall and in particular the post-transplant patient morbidity.

O.428**LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY IN 3003 PATIENTS.**

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Background: We report the outcome of Laparoscopic sleeve Gastrectomy (LSG) in a high-volume bariatric center.

Methods: Between 2006 and 2014, 3003 patients underwent LSG. Data collected included patient characteristics, morbidity and mortality, length of stay (LOS), percent excess weight loss (%EWL) and resolution of comorbidities. All patients underwent preoperative multidisciplinary evaluation and postoperative follow-up, including medical and dietary consults and psychological cognitive behavioral treatment.

Results: Of the 3003 patients, 1901 were females (63%). The mean age and BMI were 43 years (range 14-76) and 42.8 kg/m² (range 35-73), respectively. Median operative time and LOS were 50 minutes (range 32-94) and 2.2 days, respectively. In 94% LSG was the first bariatric procedure. There were 461 concomitant operations: 204 cholecystectomies, 189 hiatal hernia, 52 umbilical hernia, and 16 ventral hernia repairs. Early postoperative complications occurred in 131 patients (4.36%) and included bleeding (2.1%), leak (0.83%). There was one death from bleeding. %EWL at 1, 2, 3, 4 and 5 years was 72.3%, 67%, 59.4%, 57.1% and 63.8% respectively.

Conclusions: LSG performed in a high volume center is effective and safe.

O.444**GASTRIC PPLICATION: AS A REVISIONAL PROCEDURE FOR FAILED PREVIOUS BARIATRIC SURGERY**

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Conventional Bariatric Surgeries (Gastric Bypass, Gastric Band, Sleeve Gastrectomy, Vertical Banding Gastroplasty) are associated with a high rate of failure or weight regain, which are mainly related to dispositive displacement or dysfunction, gastric pouch dilatation and/or gastrojejunal anastomosis enlargement. Their surgical treatment is associated with a high incidence of complications, prolonged hospital stay, and high cost. Published short term and midterm data on Gastric Plication shows that it is effective on excess weight loss and is associated with a low rate of complications. Authors present their experience on 1110 Gastric Plications over a period of 60 months as a treatment for morbid obesity. Among this case series, 33 cases (2.97%) had a previous bariatric surgery. 26 patients (78.78% of the cases) had previous LAGB, 4 patients (12.12% of the cases) had previous open VBG, 3 patients (9.09% of the cases) had previous GB, and 1 patient (3.84% of the cases) had previous SG. The data included 25 females and 8 males with a mean age of 37.05 and a mean weight of 108.09. Their mean BMI was 38.68. The average % of EWL (excess weight loss) at 1, 3, 6, 12, and 18 months was 28.09, 40.68, 63.92, 72.17, and 82.95 respectively. There was no mortality or major morbidity recorded. Hospital stay was 2 days. Gastric

Plication is a safe and efficient procedure on excess weight loss in failed previous bariatric surgery. It has a low rate of postoperative complications, short hospital stay, and low cost.

O.448

IS MARGINAL ULCERATION MORE COMMON AFTER MINI GASTRIC BYPASS?

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Background: Marginal ulceration at the gastro-jejunal anastomosis remains an uncommon but significant complication of bypass surgery which can be resistant to conservative therapy. The Mini Gastric Bypass (MGB) has become more popular due to its lower incidence of complications and weight reduction comparable with Roux-en-Y Gastric Bypass (RYGBP). We sort to compare the incidence of marginal ulceration for MGB and RYGBP at our high volume UK centre.

Methods: Review of a prospective database of both MGB and RYGBP focusing on marginal ulceration and associated risk factors – age, sex, current smoking history, diabetes, NSAID usage.

Results: Since 2012 117 MGB procedures have been performed; median age 44 year (20-69), 24.7% (29) had diabetes. This compares with over 1400 RYGBP since 2007 and 831 since 2012; median age 45 years (18-75). Four (2.4%) of MGB patients developed symptomatic marginal ulceration one requiring urgent surgery for perforation (20+ day smoker). Two others had pouch inflammation, one requiring revision of gastro-gastric fistula. With RYGBP 3.1% (35/ 1144 analysed to date) developed ulceration, five resulting in gastro-gastric fistulae and two in perforation.

Conclusions: The incidence of marginal ulceration after MGB is comparable to that for RYGBP. Smoking is a risk factor and we advocate cessation prior to bariatric surgery

O.452

BARIATRIC SURGERY IN PERI-TRANSPLANT PATIENTS

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Background: Involvement of bariatric operations in the peri-transplant setting could be at different stages – from a prospective organ recipient (1), to those that have already been transplanted (2). Different bariatric operations can be used in different settings and various organ transplantations. We examined the effectiveness and safety of bariatric operations in prospective recipients and transplanted patients. The organs and organ combinations transplanted or to be transplanted were liver, kidney, liver & kidney, kidney & pancreas and heart.

Methods: We collected all bariatric procedures performed as a preparatory step in these two groups between April 2011 and March 2015 in our center. The data included demographics and graft function, weight, BMI, EWL, and morbidity. Mean follow-up was 18 months (2-47).

Results: Thirty-eight patients underwent bariatric operations (15 gastric bypass, 29 sleeve gastrectomy, one duodenal switch, two patients underwent two procedures). Twenty-six patients were involved in Kidney transplant (six future recipients, 20 transplanted patients, of them one –kidney and pancreas); nine in the liver group, (four future recipients, four after OLT, and one – simultaneous liver transplantation with sleeve gastrectomy); Three in the heart group (two listed candidates, one of them on LVAD, one heart transplanted patient).

Among all the transplanted patients (group 2, all organs, 24 patients), mean preoperative weight and BMI were 118 kg(104-152 kg) and 42 kg/m² (38 - 50 kg/m²), respectively. Mean postoperative weight and BMI were 84(60-145) and 33 (23-48), respectively. The mean EWL was 54 (9-81%). There was one short term and one long-term weight loss failures. There were four major complications (17%) – one intra-abdominal bleeding, one anastomotic leak (OLT patient), one stricture and one transient CRF in a renal transplanted patient. No rejection or graft dysfunctions were encountered. Two prospective heart recipients (group 1) were delisted due to improvement.

Conclusions: In this series, bariatric operations appear to be relatively safe and effective in peri-transplanted patients.

O.458

PREOPERATIVE ASSESSMENT OF MOTIVATION IS NOT PREDICTIVE FOR WEIGHT LOSS AFTER ROUX-EN-Y GASTRIC BYPASS

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Background: Preoperative motivation is often considered supportive for postoperative weight loss in RYGB patients. It might play an important role in the eventual weight loss achieved. The aim of this study was to identify the predictive value of preoperative motivation for weight loss after RYGB.

Methods: Data of 2824 patients, who underwent RYGB surgery and pursued an 18 month pre- and postoperative lifestyle change program at the Dutch Obesity Clinic, was collected prospectively. Variation in weight loss was assessed at 3 and 12 months postoperative. Motivation was determined during screening by a multidisciplinary team (psychologist, doctor, physiotherapist, dietitian) according to the stages of change in modifying behavior by Diclemente and Prochaska. Patients were allocated to one of the five stages; pre-contemplation, contemplation, preparation, action, maintenance.

Results: The number of patients allocated to each stage, pre-contemplation, contemplation, preparation, action, maintenance, was 270, 2376, 170, 8 and 0, respectively. ANOVA Showed that differences in weight loss between each stage were not significant at 3 and 12 months for each of the four disciplines ($p > .05$ for all).

Conclusions: Preoperative motivation assessed by a trained multidisciplinary team was not predictive for weight loss outcome at 3 and 12 months after RYGB. Preoperative motivation might not be of much influence on the eventual weight loss achieved by the patient. An alternative explanation might be that preoperative low motivated patients become motivated by the lifestyle change program and thus rise to the same stage of motivation as the other patients.

O.466 OUTCOME OF LAPAROSCOPIC GASTRIC BYPASS IN SEVERE OBESE PATIENTS WITH BARRETT'S ESOPHAGUS

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Background: The Barrett's Esophagus (BE) has a 0.5 to 2% annual risk of developing adenocarcinoma. About 10% of people with chronic symptoms of Gastroesophageal Reflux Disease (GERD) develop BE. It was reported that patients with severe obesity and BE have shown improvement of this preneoplastic disease after Laparoscopic Roux and Y Gastric Bypass (LRYGB).

Design: Retrospective cohort study of prospectively collected database.

Methods: 25 patients with diagnosis of EB that underwent to LRYGB between June 2005 and June 2013 were evaluated. Data included patient's demographic, BMI and type of EB. Outcome data are expressed in mean, SD and range. Wilcoxon Performed -rank test was use to compare the EB Changes on endoscopy and pathology expression before and after LRYGB.

Results: 64% male, age 48.5 ± 8.9 years (28-65). Initial BMI 43.2 ± 7.9 kg/m² (35-74). Postoperative BMI 29.04 ± 3.8 kg/m² (22-37). 18 patients had short EB (≤ 30 mm) and 7 patients with long EB (≥ 31 mm). Heartburn symptoms and regurgitation were resolved on 95.24% of patients at a mean of 6.5 months after LRYGB. Upper endoscopy (UE) postoperative control had a median of 13.8 months (12-17.5). There was UE significant improvement ($P = 0.0098$), and also pathology changes ($P = 0.0488$) after the surgery. None of the patients had disease progression.

Conclusions: We propose LRYGB technique as the standard procedure for the treatment of patients with severe obesity associated with Barrett's esophagus because of the excellent results of this surgery in terms of weight loss as well as the improvement of EB. LRYGB could also be considered in patients with severe obesity and GERD symptoms.

O.467 EARLY PIVOTAL TRIAL RESULTS WITH USE OF ENDOSCOPIC SUTURE ANCHORS FOR OBESITY: THE POSE ESSENTIAL STUDY

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Background: Patients/clinicians continue to request safer/less invasive tools for tackling obesity. The g-Cath™ EZ Suture Anchor Delivery Catheter with Snowshoe® Suture Anchors, part of the Incisionless Operating Platform™ (USGI Medical, San Clemente, CA, USA), has been used to endoscopically plicate gastric tissue durably since 2007. Purpose of this sponsored study was to evaluate use of these anchors placed in the fundus /distal gastric body (Pose™ procedure) as an early weight loss intervention.

Methods: A randomized, evaluator/subject blinded, parallel-group, controlled study was undertaken in the US to evaluate the safety and efficacy of treating Class I/Class II obese patients with placement of g-Cath EZ suture anchors with diet/exercise compared to diet/exercise alone (sham treatment). 332 subjects were enrolled in a 2:1 (treatment: sham) fashion at 11 sites. Primary efficacy endpoints at 12 month unblinding were: 1. Percentage in active group with $\geq 5\%$ TBWL and 2. Mean %TBWL delta between groups. Primary safety endpoint was a comparison between groups based on overall incidence of reported adverse events. 15 randomized endoscopies will be performed at 12 months in active group.

Results: Adverse event rates to date are consistent with a low-moderate risk device. Efficacy data and group comparisons are unavailable until last subject reaches 12 months. Thereafter, results will be analyzed for presentation.

Conclusions: Pose appears to be having a favorable risk profile and can durably suture gastric tissue with potential as a safe and effective weight loss intervention for obesity.

O.474**LONG TERM RESULTS OF MINI GASTRIC BYPASS IN MORBIDLY OBESE TYPE 2 DIABETICS****K.S. Kular**, N. Manchanda, G.K. Cheema*Kular College & Hospital, Ludhiana, PB, India***Background:** Mini Gastric Bypass (MGB) is emerging as a safe, effective and reversible procedure showing good results in T2DM control.**Methods:** We performed a retrospective analysis of prospectively collected data of 983 T2DM patients with morbid obesity, which underwent MGB from Feb 2007 to Feb 2014. Data was reviewed with regards to sex, age, anthropometry, duration of diabetes, glycemia, glycosylated hemoglobin (HbA1C), and T2DM outcomes. Remission was defined as HbA1c of <6.0 % without medicine.**Results:** Of the 983 patients, 634 were women 349 men (mean age 39.4± 9.2years). Preoperative characteristics: BMI 42±3.3 kg/sq.m, weight 118.0 ± 19.2 kg and duration of T2DM 6.2±3.1 years. The mean HbA1C decreased from 10.3±1.1 to 5.9±0.6 in 1st year and 5.6±1.5 in 2nd year and 5.9±1.5 in 8th year. Major complication rate was 1.3 %, No leaks, no mortality. The mean BMI decreased post-operatively from 42±3.3 kg/sq.m to 29.6±2.3 in 1 year, 26.4±3.7 in 2 years and 26.9±2.1 in 8 years. Complete remission of type 2 DM was achieved 95 % at 1 year 95.4 % at 2 years and 87 % at 8 years.**Conclusion:** Mini Gastric bypass in obese patients is associated with a high remission rate of type 2 diabetes. MGB safely and effectively ameliorated diabetes and associated comorbidities, reducing cardiovascular risk, in patients with a BMI of 30–59 kg/sq.m.**O.479****DOES PREVALENCE OF METABOLIC SYNDROME PRE-GASTRIC BYPASS SURGERY PREDICT WEIGHT LOSS AND WEIGHT LOSS MAINTENANCE POST-SURGERY?****Sherman Smith**¹, Jaewhan Kim², Steve Simper¹, Rodrick McKinlay¹, Lance Davidson³, Steven Hunt⁴, Ted Adams^{4,5}¹*Rocky Mountain Associated Physicians, Salt Lake City, Utah*²*Division of Public Health, University of Utah, Salt Lake City, Utah*³*Department of Exercise Sciences, Brigham Young University, Provo, Utah*⁴*Division of Cardiovascular Genetics, University of Utah, Salt Lake City, Utah*⁵*Intermountain LiVe Well Center, Salt Lake City, Utah***Background:** Predicting short-term weight loss and long-term weight loss durability following gastric bypass (GBP) surgery has important clinical relevance. This study explored whether or not the presence of metabolic syndrome (MetS) pre-GBP surgery was associated with short- and long-term weight loss.**Methods:** Following metabolic testing, metabolic syndrome (MetS) was assessed in patients (n=418) prior to GBP surgery (baseline) and 2 and 6 years post-GBP. Criteria of the American Heart Association were used to define MetS. Linear regression was used to compare weight change from baseline to 2 years and from 2 to 6 years between patients with and without MetS prior to GBP. Data were adjusted for baseline weight, gender and age.**Results:** Compared to pre-GBP MetS patients (n=271; 65%), pre-GBP non-MetS patients (n=147; 35%) lost significantly more weight from baseline to year 2 (4.1 kg; p=0.001; 95% CI, 1.6-6.6). However, there was no significant difference between the pre-GBP surgery patients with and without MetS with respect to weight regain from 2 to 6 years post-GBP (p=0.47). MetS prevalence was reduced from 65% to 18% assessed at 2 years post-GBP.**Conclusions:** Prevalence of MetS prior to GBP surgery predicts reduced short-term, weight loss following GBP compared to non-MetS pre-GBP patients. Weight regain (2 to 6 years post-GBP) is similar for pre-GBP MetS and non-MetS patients, most likely due to reduced MetS prevalence at year 2.**O.480****IMPROVED CARDIORESPIRATORY FITNESS PERSISTS 10 YEARS FOLLOWING GASTRIC BYPASS SURGERY****Steve Simper**¹, Jaewhan Kim², Sherman Smith¹, Rodrick McKinlay¹, Lance Davidson³, Steven Hunt⁴, Ted Adams^{4,5}¹*Rocky Mountain Associated Physicians, Salt Lake City, Utah*²*Division of Public Health, University of Utah, Salt Lake City, Utah*³*Department of Exercise Sciences, Brigham Young University, Provo, Utah*⁴*Division of Cardiovascular Genetics, University of Utah, Salt Lake City, Utah*⁵*Intermountain LiVe Well Center, Salt Lake City, Utah***Background:** There appears to be no data reporting long-term changes in cardiorespiratory fitness (CRF) (i.e. greater than two years) following gastric bypass (GBP) surgery. Successful weight loss and participation in physical activity (PA) have been linked to CRF. The aim of this study was to determine whether or not changes in CRF measured before and 10 years following GBP surgery were significantly different between GBP and severely obese, non-GBP patients.

Methods: As part of a long-term prospective GBP study, three groups of participants: (post-GBP patients (SURG), n=86; patients seeking GBP but did not have surgery (No SURG), n=39; and severely obese controls not seeking GBP (CNTL), n=56) underwent exercise treadmill tests (80% predicted maximal heart rate) at baseline and 10 years follow-up. Linear regression was used to compare change in treadmill time (TT) from baseline to 10 years between groups. Data were adjusted for baseline TT, pre-GBP weight, gender and age.

Results: There were no significant differences in TT at baseline between groups. SURG had a significantly greater change in measured TT (10 years minus baseline) compared to No SURG (p=0.048) and CNTL (p=0.021). SURG also had a significantly greater change in weight (10 years minus baseline) compared to No SURG (p<0.001) and CNTL (p<0.001).

Conclusions: GBP surgery improves CRF out to 10 years post-GBP. Sustained increase in CRF is highly correlated with weight loss such that GBP patients that maintained high CRF also maintained weight loss.

O.482

THE SAFETY OF LAPAROSCOPIC SLEEVE GASTRECTOMY AMONG SMOKERS

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Background: Although smoking is thought to increase surgical complications, there is little scientific data on the effect of smoking on outcomes after bariatric surgery, specifically the laparoscopic sleeve gastrectomy (LSG). This study's objective was to determine the effect of smoking on outcomes after LSG.

Methods: In the 2010-2012 NSQIP database, patients with BMI ≥ 35 kg/m² who underwent elective LSG were identified. Primary outcome was overall 30-day complication rate and secondary outcomes included major postoperative complications.

Results: Of 10,882 LSG patients, 1,098 (10.1%) were smokers. Mean BMI was 46.2 kg/m². Smokers and non-smokers were similar in baseline characteristics, but smokers were younger (40.8 vs. 44.4 years, p<0.001). There was no difference in the overall rate of 30-day complications between smokers and non-smokers (8.5 vs. 8.2, p=0.710). Specific postoperative complications, including wound infection, intraabdominal infection, sepsis, renal injury, myocardial infarction, cardiac arrest, deep vein thrombosis, pulmonary embolism, reoperation, and prolonged length of stay did not differ between groups. After correcting for relevant covariates in a logistic regression, smoking did not increase the odds of 30-day complications (OR 1.03, 95%CI=[0.74-1.43], p=0.871). Smokers did, however, have an increased risk of unplanned reintubation (OR 3.942, 95%CI=[1.13-13.79], p=0.032).

Conclusions: Smoking does not impact the overall rate of 30-day complications after LSG, but it is associated with an increased risk of unplanned reintubation. Surgeons should take this into account when counseling patients and determining their policy for smoking cessation prior to elective bariatric surgery.

O.484

INCIDENCE OF OESOPHAGO-GASTRIC PATHOLOGY IN PATIENTS REFERRED FOR OBESITY SURGERY – THE YORK EXPERIENCE

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Background: Upper gastrointestinal endoscopy is performed routinely prior to bariatric surgery at our institution to detect and/or treat lesions that might affect the type of surgery performed, cause complications in the immediate postoperative period, or result in symptoms after surgery. Our aim was to analyse the prevalence of pathology found on preoperative upper gastrointestinal endoscopy in our patient population and in doing so evaluate the benefit of performing this investigation as part of pre-operative work up.

Methods: A nine year (2006-2014) retrospective case note review was performed of all patients undergoing pre-operative work up for bariatric surgery at our institution. Patient demographics and endoscopy findings were collated and analyzed.

Results: 664 patient case notes were reviewed. 632 (95%) of these patients had preoperative endoscopy. 450 (71%) of the 632 patients undergoing pre-operative endoscopy had positive findings. The prevalence of individual findings are as follows: Oesophagitis: 14% (96/632), Hiatus Hernia: 12% (78/632). Gastritis 17% (108/632). Gastric Ulceration: 2% (15/632). Helicobacter Pylori 13% (83/632). 0.8% (5/632) were found to have a neoplastic process (2x gastric adenocarcinoma, 2x gastric intestinal metaplasia and 1x neuroendocrine carcinoma).

Conclusions: Upper gastrointestinal endoscopy has a high incidence of positive findings (71%) in bariatric patients at our institution. We incidentally found a 0.8% prevalence of malignancy at pre-operative endoscopy with these patients being referred on to a tertiary center for further management. We have demonstrated the importance of performing routine preoperative endoscopy in the work-up of bariatric patients to enable diagnosis and treatment of pathology which may affect surgery or cause complications post-operatively.

O.486

IMPROVEMENT IN QUALITY OF LIFE AFTER BARIATRIC SURGERY BASED ON BARIATRIC ANALYSIS AND REPORTING OUTCOME SYSTEM: A CROSS-SECTIONAL STUDY IN INDIAN PATIENTS

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Background & Aims: The quality of life (QOL) of morbidly obese patients is reduced secondary to its physical, psychological, and social consequences. Bariatric surgery leads to marked and long term sustained weight reduction with resolution of co-morbidities and hence improves QOL. The aim of this study was to evaluate the QOL of patients after bariatric treatment according to the Bariatric Analysis and Reporting Outcome System (BAROS) during the different phases of weight loss and maintenance. Differences in BAROS according to age, gender and type of surgery was also analyzed.

Methods: A cross-sectional design was used in which clinically severe obese patients who underwent bariatric surgery from January 2013 to June 2014 at 6 months to 2 years post-surgery were examined with the Bariatric Analysis and Reporting Outcome System by telephone questionnaire. Differences in BAROS according to postsurgical time-points, age, gender and type of surgery were analyzed.

Result: There were 210 patients who underwent bariatric surgery during the study period. 170 patients could be interviewed and were assessed by BAROS and included in the study. 143 underwent sleeve gastrectomy and 36 underwent roux-en-Y bypass. Mean age was 43 ± 12.80 (Range 17-73). Mean BAROS score was 5 ± 1.62 (Range 1.5-9). There was significant difference in score according to time-point after surgery and gender however type of procedure and age did not show any difference.

Conclusion: QOL increase with time after bariatric surgery though many differences are apparent within several weeks after surgery.

O.495

METABOLIC SURGERY FOR TAIWANESE PATIENTS WITH YOUNG-ONSET TYPE 2 DIABETES

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Background: We examined outcomes in a prospective cohort of Taiwanese patients who received bariatric/metabolic surgery to ameliorate type 2 diabetes. Patients with young-onset diabetes as defined by diagnosis age < 40 years and those with late-onset diabetes defined by diagnosis age ≥ 40 years were compared.

Methods: Between 2007 and 2013, 556 patients (young-onset, n=337; adult-onset, n=219) underwent a detailed clinical assessment and bariatric/metabolic surgery in a tertiary-care hospital and were prospectively studied for at least one year (up to 7 years). Primary outcome measures were safety and the ratio of patients achieving diabetes remission (HbA1c < 6.0% without anti-glycemic medication).

Results: Young-onset patients had higher BMI and HbA1c profiles than old-onset patients. Surgical procedures and major complication rates were similar between the two groups. At one year after metabolic surgery, with similar weight loss, young-onset patients had a higher complete remission rate than late-onset patients (57.3% vs. 50.2%, p=0.019). At 5-year after surgery, young-onset patients maintained a higher weight loss and prolonged diabetes remission rate than late-onset patients (65.3% vs. 54.2%, p=0.040). Duration of T2DM and weight loss was two independent predictors of diabetes remission after metabolic surgery.

Conclusions: This report describes the largest, long-term study examining metabolic surgery for young-onset diabetic patients. Metabolic surgery may achieve durable glycemic control in selected young-onset than those with late-onset.

O.508

PREVALENCE OF EARLY DUMPING SYNDROME AFTER PRIMARY ROUX-EN-Y GASTRIC BYPASS

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Background: Although early dumping syndrome is a well-known complication after Roux-en-Y Gastric Bypass (RYGB), data on the long-term prevalence are limited and inconclusive. This study aims to describe the prevalence of early dumping syndrome in patients 3 to 6 years after primary RYGB, using 3 different criteria.

Methods: In this cross-sectional study a total of 140 patients after RYGB were randomly selected and approached. Of these, 51 patients agreed to participate in a Mixed-Meal Tolerance Test using a liquid nutrition supplement (Ensure Plus 200ml). The results of the first 28 are presented here. Heart Rate (HR) and Haematocrit (Ht) were measured at baseline and 10, 20, 30 and 60 minutes after the test meal. Symptoms scores were measured at baseline, 30 and 60 minutes. Early dumping was defined as a HR-increase of >10 beats per minute, a Ht-increase of >3%, and/or ≥ 2 gastrointestinal symptoms and ≥ 1 vegetative symptom on a symptom score. A confidence interval (CI) was calculated using the Clopper-Pearson method.

Results: Prevalence of early dumping was 89% (n=25) according to HR (95% CI [0.72;0.98]); 32% (n=9) according to Ht (95% CI [0.16; 0.52]) and 7% (n=2) recorded symptom score (95% CI [0.01; 0.24]). In the vast majority the objective changes indicative of early dumping occurred within 10 minutes postprandially. Symptoms were reported within 30 minutes postprandially.

Conclusions: The interim results show a large discrepancy of the prevalence of early dumping between the different criteria. Hemodynamic evidence of early dumping is only in a few cases accompanied by complaints.

O.515

LAPAROSCOPIC GASTRIC PLICATION AS RE-DO BARIATRIC PROCEDURE

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Introduction: Different metabolic, cognitive and other factors contribute to risks of bariatric treatment failure. Laparoscopic Greater Curvature Plication (LGCP) reduces stomach volume by imbricating (infolding/plicating) stomach wall. LGCP may be considered for re-do surgeries in selected cases, predominantly after failed primary bariatric operations, such as adjustable gastric banding, sleeve gastrectomy, or even as re-plication.

Objectives: Evaluate LGCP outcomes in re-do bariatric surgeries

Materials and Method: Outcomes of 2781 different bariatric and metabolic operations performed between 2003-2012 were reviewed. 251 (9.02%) patients required elective reoperation due to outcomes failure. LGCP was chosen as re-do operation in 123 patients (49.0%). 80 (65.0%) were re-plications, 32 (26.0%) after AGB, 11 (9.0%) following other procedures. Initial (pre-bariatric surgery) BMI, mean %EWL at the time of re-do operation, %EWL 3,6,12,18 months after re-do, T2DM changes (glycaemia, IRI, Hb1A, HOMA IR, fasting insulin secretion) were recorded.

Results: Initial (pre-bariatric) BMI was 42.8 ± 6.7 . Mean %EWL at re-do was 23.5 ± 3.6 . %EWL was significantly ($p < 0.001$) reduced 3, 6, 12, 18mths after re-do, reaching additional $10.2\% \pm 2.1$, $23.4\% \pm 3.5$, $28.9\% \pm 4.1$ and $27.8 \pm 3.9\%$ respectively. The overall %EWL was 51.3% 18 months after re-do. In 32 (77.7%) diabetics glycemia, Hb1A and HOMA IR dropped to (5.2 ± 1.5 mmol/l), ($4.2 \pm 0.7\%$), (4.1 ± 1.2) respectively ($p < 0.001$). In 10 (22.7%) patients T2DM improved, however didn't reach normal values. In two (4.5%) T2DM no post re-do changes occurred.

Conclusion: LGCP if performed as re-do operation exhibits effectiveness in weight loss and T2DM improvement in short-to-mid term.

O.518 INTRAPERITONEAL LOCAL ROPIVACAINE ANESTHESIA IN SLEEVE GASTRECTOMY: PILOT DOUBLE-BLIND RANDOMIZED CONTROLLED TRIAL

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Background: Ropivacaine can be applied intraperitoneally to reduce postoperative pain. However, this effect was not studied in patients undergoing sleeve gastrectomy. A pilot study was carried out to establish feasibility of the method and to obtain data for sample size calculation.

Methods: 38 obese patients undergoing sleeve gastrectomy in the morning without simultaneous operations were randomized using random number sequence to receive 0,5% ropivacaine or normal saline. 20 ml of solution blinded from the surgeons, researchers and patients were rinsed over the anterior stomach wall, crura of diaphragm and into omental sac (posterior stomach wall) in the beginning of the procedure. Pain and nausea were measured using 100 point visual-analogue scale 2 hours after the procedure, and at 9pm the same day along with analgesics demand.

Results: Postoperative pain in the ropivacaine group was 47.7 ± 32.0 versus 58.1 ± 28.2 ($p = 0.3$) in the placebo group 2 hours after operation and 31.5 ± 24.3 versus 35.7 ± 27.6 ($p = 0,6$) at 9pm. Opiates demand was 31.8% in the ropivacaine versus 43.8% in the placebo group ($p = 0.45$). No notable changes in postoperative nausea and vomiting were found. Statistical power of the study with the pilot sample size is 18%. Based on these findings, calculated sample size of 142 will provide 80% statistical power.

Conclusions: Preliminary results show feasibility of the method and statistically non-significant postoperative pain reduction 2 hours after operation. Given that statistical power in the current sample size is low, the study should be continued.

O.521 GASTRIC BYPASS SURGERY HAS GREATER EFFECT THAN CALORIE RESTRICTION ON INCRETIN RELEASE AND INSULIN SECRETION ALREADY ON POSTOP. DAY 1.

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Background: Gastric bypass surgery (GBP) provokes rapid improvement of type 2 diabetes (T2D) prior to significant weight loss. This has been attributed to altered secretion of the two incretin hormones glucagon-like peptide 1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP). Here we studied the effects of very low calorie diet (VLCD) vs. the immediate effects of GBP on glycaemia and incretin release.

Methods: Eight T2D obese women and 8 obese controls (C) underwent mixed meal tests (MMT) 4 w before (MMT_{-4w}), 1 day before (MMT_{-1d}), 1 day after (MMT_{+1d}) and six weeks after (MMT_{+6w}) gastric bypass. MMT_{-4w} was performed before VLCD and MMT_{+1d} constituted the first postoperative meal. Glucose, insulin and incretins were analyzed. Gastric bypass surgery was standardized to a 50 cm biliary limb and 150 cm alimentary limb and a 5 cm gastric pouch.

Results: Despite similar glucose levels, the insulin response was markedly increased at MMT_{+1d}, compared to MMT_{.4w} and MMT_{.1d} (2.4- and 2.8-fold). At MMT_{+6w} a more rapid rise was evident. GLP-1 levels were similar in all MMTs except MMT_{+6w} where an increased response was seen; this was stronger in T2D vs. C. The GIP-response was higher at MMT_{+1d}, compared to MMT_{.4w} and MMT_{.1d} (1.6- and 1.4-fold). The increased GIP-response was attenuated in C at MMT_{+6w}, but still evident in T2D.

Conclusions: VLCD has minor impact on the parameters analyzed; rather GBP *per se* elicits an immediate stimulatory effect on insulin and GIP levels in response to an MMT as first meal on day 1 after surgery.

O.525 PREOPERATIVE COMORBIDITY DOES NOT INCREASE THE RISK FOR POSTOPERATIVE ABSENTEEISM AFTER BARIATRIC SURGERY

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Background: Obesity-related diseases are associated with direct and indirect costs to society. We studied the societal costs for sick-leave during three years before and three years after bariatric surgery.

Patients and methods: Demographic data for operated patients from the Scandinavian Obesity Surgery Registry (SOReg); (national coverage > 98%) were cross-matched with Social insurance data (coverage 100%) for the period ± 3 years from the date of operation. In 2010 a total of 7242 bariatric surgeries were performed; the study group is 6055 unique individuals aged < 65 that were not receiving full or part-time disability-pension, and with complete data-sets. Two reference populations were identified, 1/ general match on sex and age and 2/ also matching on absenteeism pattern preoperatively. The effect on sick-leave from comorbidities, anthropometry, educational level and annual income was measured.

Results: Diabetics had higher absenteeism throughout the study period, non-diabetics improved after surgery. An increase of 10 days was observed for the 90 days after surgery. Simple logistic regression showed that female sex (OR 1.6, CI 1.4-1.8), high age (OR 1.9, CI 1.3-2.9), low income (OR 2.9, CI 2.5-3.5) and sick-leave before surgery were associated with more sick-leave 90 days after surgery. Long-term differences from the reference population were largely consistent with preoperative differences. At three years, sick-leave tended to increase compared with reference population.

Conclusion: Increase in societal remuneration costs for the first 90 postoperative days was 10 days. The presence of comorbidity did not elevate the risk for sick-leave 90 – 1095 days after surgery.

O.527 VITAMIN B12 DEFICIENCY- HUGELY UNDERDIAGNOSED! A BETTER TOOL NEEDED TO IDENTIFY HIGH RISK BARIATRIC SURGERY PATIENTS

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Background: Untreated vitamin B12 (B12) deficiency predisposes patients to irreversible neurological complications including subacute combined degeneration of spinal cord. It is one of the most common deficiencies following Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG). Routinely measured serum total B12 levels may not indicate B12 status reliably. Holotranscobalamin (HTC)-biologically active fraction of total B12 depicting B12 storage in the body and Methylmalonic acid (MMA)-a functional marker of B12 deficiency helps in early detection of B12 deficiency and optimization pre and postoperatively thereby preventing neurological complications.

Methods: Retrospective analysis of locally available B12 status profile (B12, HTC, MMA) of bariatric surgery patients from May 2014 to Jan 2015 (nine months) was done to identify patients with B12 deficiency.

Results: In a period of 9 months, out of 264 patients, 62 (23.4%) patients had a normal serum B12 levels but low HTC levels confirming B12 storage depletion and therefore at high risk of severe B12 deficiency in early postoperative period. Out of these 62 patients, 40 (64.5%) had elevated MMA levels suggestive of functional B12 deficiency at cellular level and increased risk of neurological complications postoperatively in absence of adequate B12 supplementation.

Conclusions:

- A large fraction of B12 deficiency (storage & functional) patients remain undiagnosed due to normal serum B12 levels, predisposing patients to severe neurological complications following malabsorptive surgeries like RYGB and sleeve gastrectomy.
- HTC and MMA blood levels, more sensitive and specific markers of B12 status are indicated in high risk patients for timely diagnosis and management.

O.530 DELAYED/INCORRECT DIAGNOSIS OF CO-EXISTING VITAMIN & TRACE METAL DEFICIENCIES IN BARIATRIC SURGERY PATIENTS

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Background: Bariatric surgery patients require life-long supplementation and monitoring of essential vitamins & minerals, absence of which can lead to delayed/incorrect diagnosis with potentially irreversible complications.

Method: We prospectively looked at 2 cases which represent extreme nutritional problems presented to our unit in one year.

Results: Case 1- 51 year old female with past history of bariatric surgery elsewhere was admitted with a diagnosis of Wernicke's encephalopathy (WE) and inability to walk for last 3 years. Thorough work up excluded WE and confirmed severe copper and functional vitamin B12 (B12) deficiencies as cause of her neurological deficits, which improved significantly following copper infusions, B12 injections and robust physiotherapy.

Case 2-64 year old male, whose diabetes had resolved following bariatric surgery, had a reversal of bariatric surgery due to long standing hypoalbuminaemia. In postoperative period, patient's blood sugar rose to as high as 22 mmol/L. Blood levels of zinc and selenium were measured as deficiency of both increases insulin resistance. Very low serum levels of zinc and selenium were found and the glycaemic status improved to near normal following zinc and selenium infusion and injection respectively.

Both patients benefitted from trace metal level corrections, thereby helping the overall metabolism as well as the specific complications.

Conclusions: Following bariatric surgeries, patient can develop complex clinical manifestations due to co-existing vitamin and trace metal deficiencies leading to delayed/incorrect diagnosis and inappropriate management. Trace metals deficiencies like copper, zinc and selenium should be kept in mind in patients with metabolic complications including neurological.

O.533

LONG BILIOPANCREATIC LIMB GASTRIC BYPASS FOR COMPLETE REMISSION OF TYPE-2 DIABETES IN PATIENTS WITH BMI 30 - 35

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Background: Ileal-stimulation for release of incretins is one important reason for remission of type-2 diabetes. Conventional gastric-bypass does not stimulate the ileum because of the short biliopancreatic-limb. Long biliopancreatic-limb by-pass leads to a very important release of incretins, leading to better results in metabolic surgery. Objective: evaluate the results of long biliopancreatic-limb gastric-bypass in the complete remission of diabetes in patients with BMI 30-35

Methods: From January/2011 to March/2014, 94 diabetic patients with BMI 30–35 were submitted to long biliopancreatic-limb gastric-bypass. Fasting glucose and glycosylated hemoglobin (HbA1c) were collected before the surgery and in March/2015. The surgery performed was a laparoscopic gastric-bypass with a wide gastrointestinal-anastomosis, and a long biliopancreatic-limb Roux-en-Y reconstruction, with 200 cm of biliopancreatic-limb, and 50 cm of alimentary-limb. It was considered complete remission when the patient had HbA1c below 6,0% in the absence of pharmacologic therapy

Results: Before the surgery, the mean BMI, fasting glucose and HbA1c of the patients were 32,5kg/m², 186,1 mg/dl and 8,6 % (6,3 to 11,6), respectively. 41 patients used oral hypoglycemics+insulin, and 53 used only oral-hypoglycemics. There was no death, major complication or reoperation. The follow-up was between 12 and 50 months. In march/2015, the mean BMI, fasting-glucose and HbA1c were, respectively, 25,2kg/m², 89,3 mg/dl and 5,1 %. No one patient was using medication. 88 patients (93,6%) achieved complete remission of diabetes (HbA1c below 6,0%).

Conclusions: Laparoscopic long biliopancreatic-limb gastric by-pass is safe and extremely effective for the complete remission of type-2 diabetes in patients with BMI 30–35.

O.536

DEFINING TREATMENT SUCCESS IN BARIATRIC SURGERY

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Background: There is a lack of consensus within the bariatric surgery literature on how to define treatment “success”. The issue is complicated by the use of different methods of calculating weight loss at varying follow-up points. Moreover, the majority of studies have defined outcome purely in terms of weight loss without considering factors such as improvement in quality of life (QoL). This study compared bariatric surgery outcomes according to various widely used methods of defining treatment “success” and investigated the clinical utility of each.

Methods: Participants ($N = 68$) who underwent a surgical procedure for weight loss completed questionnaires pre-operatively, and at 1-2, and 4-5 years post-surgery. Treatment success was measured using previously defined cut-points of % excess weight loss (EWL) and % total weight loss (TWL) at two post-operative follow-up time points. Change in QoL was also investigated.

Results: Success rates varied substantially according to the criteria used to define treatment outcome. Clinically significant improvement in QoL was observed in participants who failed to meet criteria for a “successful” outcome according to weight loss alone.

Conclusions: These results highlight the need for a standardised and less arbitrary approach to defining treatment success. Recommendations for future research will be discussed.

O.537

SINGLE INCISION WITH AN ADDITIONAL 5MM TROCAR LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) VERSUS TRADITIONAL LSG

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Background: Single Incision with an additional 5mm trocar laparoscopic sleeve gastrectomy (SI-LSG) seems a comfortable alternative to traditional multiport LSG in order to get esthetic results. The aim of this study is to present our SI-LSG cases and compare them to LSG in terms of safety and efficacy.

Methods: *Time and place:* Clínica Alemana de Puerto Varas, June 2013 to December 2014. *Study design:* Case and control study. *Sample technique:* random 2x1 match by BMI, age and sex. *Inclusion Criteria:* SI-LSG and LSG. *Exclusion criteria:* LSG with another procedure.

Results: There were 74 SI-LSG cases, age 32.5 ± 9.1 years, 94.5% women, BMI 33.8 ± 2.8 kg/m². Comorbidities: Insulin resistance 45.9%, dyslipidemia 20.2%, depression 17.5% and arterial hypertension 12.1%. LSG matched group was 148 cases, age 32.7 ± 8.5 years, 94.5% women, BMI 33.8 ± 2.8 (p=ns). There were no mortality or reoperation on both groups. There was one trocar site bleeding on the LSG group that required blood transfusions and observation. SI-LSG follow-up was a median of 9 months. On follow-up there were two cholelithiasis which were managed by the single incision technique. There were no incisional hernias on follow-up. Excess weight loss for SI-LSG and LSG was: month1 $46.5 \pm 12.6\%$ and $46.1 \pm 18\%$, month3 $89.4 \pm 20.8\%$ y $86.3 \pm 23.1\%$ and month6 $110.8 \pm 26.2\%$ y $119.2 \pm 26.6\%$ respectively (p=ns)

Conclusions: In the short term, SI-LSG was as safe and effective than traditional LSG. For selected patients, especially for the lowest BMI, SI-LSG can be performed safely with esthetic benefits.

O.543

SAFETY AND EFFICACY OF SMALL POUCH OMEGA LOOP GASTRIC BYPASS (SPOL GBP)

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Introduction: Mini Gastric Bypass (MGBP) or Single anastomosis Gastric Bypass (SAGBP) is gaining popularity among bariatric surgeons outside North America. Biliary gastric reflux, with its possible complications, is stated as the main drawback of SAGBP. We propose modifications of the technique of SAGBP or MGBP.

Objectives: This prospective study is conducted to evaluate the safety and efficacy of a modified SAGBP with the aim of obviating biliary gastric reflux, and improving the outcome.

Methods: We performed a small 40 cc gastric pouch, a 200 cm jejunal loop and performed gastro-jejunal anastomosis in a vertical configuration with a 45 mm stoma. The combination of a small gastric pouch with wide gastrojejunostomy constructed in a vertical configuration is supposed to reduce the intragastric pressure and enhance gastric drainage.

From October 2011 to February 2015 150 patients underwent SPOL GBP. Their mean age was 32.1 ± 0.5 ys, and mean BMI 44.3 ± 0.9 . Safety and efficacy of SPOL GBP was assessed.

Results: We reported 5 conversions (3.3 %), no mortality, and one leakage successfully managed conservatively. Endoscopy confirmed Bile reflux in two cases (1.3 %) controlled by medical treatment. The average excess weight loss (EWL%) was 83.1 % at 1 year.

Conclusion: Small Pouch Omega Loop gastric bypass (SPOL GBP) is an effective and safe procedure that proved effective in minimizing bile reflux gastritis, and resulted in better than average EWL% compared with other SAGBP techniques.

O.547

SINGLE INCISION LAPAROSCOPIC VS CONVENTIONAL LAPAROSCOPIC MINI GASTRIC BYPASS

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Content: Introduction: In recent years single-incision laparoscopic surgery (SILS) has emerged as a modality of carrying out the bariatric procedures. We applied SILS for a selected number of patients enrolled into our bariatric Mini Gastric Bypass (MGB) program and compared with conventional laparoscopic MGB done during the same period.

Objectives: To analyze the safety, outcome and advantages of SILS Mini Gastric Bypass.

Methods: We started performing SILS MGB since October 2014. Until March 2015, 56 patients underwent 29 laparoscopic (mean BMI – 43.6 kg/m²) and 27 SILS MGB (Mean BMI-42.2), including six cases where concomitant surgeries were performed.

Results: The mean operation time was 54 minutes for lap group and 68 minutes for SILS group. There were no intra-operative complication or death in both the groups. One patient in SILS group needed additional port to complete surgery. The duration of postoperative hospitalization was 1.8 days in both the group and need for analgesic usage was not significantly different with 72 hours requirements in both the groups. SILS patients were satisfied with the cosmetic outcomes with cosmetic score significantly better with SILS group as well as patient's compliance. There was no significant difference in short-term outcome in both the groups with relation to % excess weight loss and resolution of co-morbidities.

Conclusion: SILS can be safely and effectively used in minim gastric bypass. In selected cases it is more efficient with better outcome.

O.552

ENDOBARRIER THERAPY EXERTS METABOLIC IMPROVEMENT ACROSS WIDE BMI RANGE: SUBGROUP ANALYSIS FROM POOLED CLINICAL TRIALS

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Background: EndoBarrier therapy (EBT) is an endoscopically-delivered liner utilized in the treatment of obese subjects with comorbidities including type 2 diabetes (T2DM) for an intended 12 month period. We assessed whether baseline BMI influenced metabolic response to EBT.

Methods: Obese (Class 1, 2, or 3) T2DM subjects (n=142) from six clinical trials were evaluated, involving (i) one-way ANOVA of weight change (%WL) by BMI category, and (ii) linear regression analysis to estimate effect of weight change on HbA1c by BMI category.

Results: All subjects experienced significant %WL with Class 3 experiencing the greatest %WL (mean -12.1%, p<0.005), suggesting that the higher the baseline BMI the greater the %WL.

Overall, a significant association between weight change and HbA1c change was observed (p=0.02), but significantly driven by Class 3 (p<0.005). The derived regression equation for HbA1c change in subjects with BMI ≥40 was: HbA1cΔ=0.0484(weightΔ)-0.4938. For BMI <35, weight change was not a good predictor for HbA1c change. Significant reductions in BP and LDL were similar across all classes (Classes 1, 2 &3). Incidence of AEs was mostly gastrointestinal in nature, mild to moderate in severity and similar across subjects. Five severe AEs were observed including nausea, vomiting, cholelithiasis, upper abdominal pain, and oesophageal perforation.

Conclusions: This analysis suggests that EBT is able to exert beneficial metabolic effects across the BMI spectrum. Further study of EBT risk:benefit profile is warranted.

O.558

LATE POSTOPERATIVE OUTCOME OF ROUX-EN-Y GASTRIC BYPASS IN MORBIDLY OBESE PATIENTS - ANALYSIS OF THE INFLUENCE OF GASTROINTESTINAL HORMONES IN WEIGHT REGAIN

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Background: Bariatric surgery is the main treatment for severe obesity, given its favorable results in terms of effective and sustained weight loss over time and control of comorbidities. The Roux-en-Y gastric bypass (RYGP) is considered the gold standard operation. However, a major concern in the late surgical follow-up is the recurrence of obesity, sometimes with substantial weight regain. There is great importance to analyze the rule of gut hormones in patients with weight regain after RYGP. The objective is to evaluate the influence of secretion of gut hormones and adipokines in late postoperative period of severe obese patients undergone RYGP, comparing postprandial secretion of ghrelin, GIP, GLP-1 and leptin between patients with late follow-up weight regain and patients with a favorable late weight control.

Methods: Twenty-four patients with postoperative follow-up from 27 to 59 months were selected and divided into 2 groups according to evolution in terms of sustained weight lost: Group A (14 patients) represented by satisfactory outcome, with percentage of Excess Weight Loss (% EWL) higher than 50% at minimum postoperative weight and sustained weight loss more than 50% of weight lost and group B (10 patients) with unsatisfactory results, represented by significant weight regain after initial achieving of weight loss success criteria, maintaining less than 50% of the weight lost, expressed as the current / the maximum %EWL ratio less than or equal to 50%. Gastrointestinal hormonal secretion was assessed by measurement of basal serum levels of ghrelin, GIP, GLP-1 and leptin, in fasting and 30, 60, 90 and 120 minutes after a standard meal

Results: There was no difference in ghrelin secretion profile, even in baseline values. There was difference in the secretion of GIP profile, with higher percentage increase in 30 minutes in group A (330%) comparing group B (192.2%) (p = 0.01). There was difference

in the secretion of GLP-1 profile, with higher increase in absolute ($p = 0.03$) and percentual values after 30 minutes in group A (124%) comparing Group B (46.5%) ($p = 0.01$). There was significant difference between baseline values of leptin, with higher levels in group B ($p = 0.02$).

Conclusions: The secretion profile of gastrointestinal hormones in patients with weight regain after RYGP is different from patients with satisfactory post-operative weight outcome. After meal stimulation, reduced levels of GIP and GLP-1 may indicate influence of intestinal hormonal secretion in the process of weight regain. Profile secretion of ghrelin was similar, and leptin increased indicates a higher fat accumulation in the weight regained group.

O.561

MODIFIED BODY ADIPOSITY INDEX FOR BODY FAT ESTIMATION IN MORBID OBESITY

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Background: Body Adiposity Index (BAI) is a simple method to estimate body fat (BF) that needs to be validate in morbid obese individuals. The objective is to evaluate BAI accuracy in BF determination of morbid obese adults

Methods: A cross-sectional prospective study that compares two methods for BF estimation (BAI vs BIA – bioelectrical impedance analysis) in severe obese adults. The BF determination in 240 morbid obese (Group 1- G1) was used to evaluate BAI limitations and to develop a specific equation. The new equation proposed was validated in 158 subjects (Group 2- G2).

Results: There was a significant difference between BF determination by BIA and BAI ($p=0.039$). The mean BF in G1 determined by BIA was $52.3 \pm 6.1\%$ and $51.6 \pm 8.1\%$ according to BAI. Gender, Waist-hip ratio (WHR) and obesity grade determined significant errors on BF estimation by BAI. A new equation (Modified Body Adiposity Index = MBAI) was developed by linear regression to minimize these errors ($MBAI\% = 23.6 + 0.5 \times (BAI)$; add 2.2 if $BMI \geq 50\text{kg/m}^2$ and 2.4 if $WHR \geq 1.05$). The new equation reduced the difference between methods ($1.2 \pm 5.9\%$, $p < 0.001$ to $0.4 \pm 4.12\%$, $p = 0.315$) and improved the correlation (0.6 to 0.7).

Conclusions: BAI present significant limitations to BF determination in morbid obesity. The new equation proposed (MBAI) was effective for BF estimation in morbid obese adults.

O.567

LAPAROSCOPIC SLEEVE GASTRECTOMY IN CHILDREN YOUNGER THAN 14 YEARS OF AGE: REFUTING THE CONCERNS

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Background: More than 90% of severely obese children and adolescents have obesity-related co-morbidities, but debatable concerns result in denying young children access to bariatric surgery.

Methods: Our multidisciplinary program database was used to extract data of young nonsyndromic children (aged ≤ 14 years) who underwent laparoscopic sleeve gastrectomy (LSG). Those patients were age, gender and height z-score matched with those on nonsurgical weight management (NSWM), and their results were compared with those of older adolescents (aged > 14 years) who underwent LSG. Generalized estimating equation analysis was performed to assess growth.

Results: 116 children below 14 years of age (11.2 ± 2.5 years) underwent LSG. Compared to the 1:1 matched group on NSWM, those children experienced significantly higher growth, gaining 0.9 more millimeters per month on average. Compared to 158 adolescents (aged 17.3 ± 2.0) who underwent LSG in our institution, the children younger than 14 years of age had a significantly lower prevalence of comorbidities ($p\text{-value} < 0.001$) but similar resolution rates ($p\text{-value}: 0.72 - 0.99$). There was no significant difference in terms of complication rate ($p\text{-value}: 0.77$), and no mortality or significant morbidity was observed in any of the groups.

Conclusions: This study challenges the existing concerns regarding the safety and efficacy of bariatric surgery in prepubertal children. LSG is evidently safe and effective in this age group, resulting in significant weight loss, improved growth, resolution of comorbidities, and no mortality or significant morbidity.

O.572

LONGIVITY OF METABOLIC IMPACT OF LAPAROSCOPIC SLEEVE GASTRECTOMY: RESULTS IN MORBIDLY OBESE INDIAN DIABETIC PATIENTS AT THE END OF SEVEN YEARS.

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Background: Laparoscopic sleeve gastrectomy (LSG) is a standard bariatric operation. It also shows a metabolic impact in terms of improvement in diabetes type 2 (T2DM) in morbidly obese patients. Sparse reports exist about the longivity of its metabolic impact. This is the study to present the results of LSG in Indian obese patients with T2 DM at the end of seven years.

Methods: From 2006 till 2010, 124 patients of Indian origin with morbid obesity and T2DM have undergone a LSG at our center by a single surgical team. The standard operation of LSG and the multidisciplinary care with regular follow ups was provided to all of them

Results: At the end of seven years we could collect information of 81 patients .N =81. M:F :: 29: 62. Age range 22 - 65 yrs. Duration of T2 DM : 6 mths to 21 yrs. BMI range : 35 - 68 kg / m2. On OHA only : 56. OHA + Insulin : 25. Average glycosylated Haemoglobin was 8.5%. At the end of seven years average BMI loss was found to be 18 kg /m2. The average glycosylated hemoglobin was 6.8 %. The insulin usage (in reduced doses) was needed in only 3 patients. 68 patients out of 81 did not need any anti diabetic medication. 10 patients were on a single OHA. 76/ 81 had other medical comorbidities related to obesity and all showed an improvement even at the end of seven years. 21/81 showed some weight gain (average 5 kg) at the end of 7 years but could retain their metabolic improvements as compared to the baseline.

Conclusions: LSG seems to be a good surgical and metabolic tool to improve the diabetic status in morbidly obese Indian T2DM patients even at the end of seven years.

O.573 REVIEW OF PATIENTS WHO UNDERWENT LAPAROSCOPIC BARIATRIC PROCEDURE AT MEDCARE HOSPITAL DUBAI.

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Background: Obesity is considered as a disease which is associated with many health problems and a higher risk of death. UAE is ranked number 5 in the world for the highest number of obese population and is in the list of top 10 countries with Diabetes. Obesity surgery is on the rise in UAE and other Middle East countries.

Objective: We at MEDCARE hospital Dubai reviewed the perioperative outcome and compared the mortality and morbidity results of 1223 patients who underwent some form of the Bariatric surgery namely Sleeve gastrectomy, Gastric Bypass, Gastric Band or revision surgery (Band removal with sleeve gastrectomy or bypass surgery) from Jan 2014 to Dec 2014, the results were statistically analyzed and compared with available online reviews of Internationally reputed hospitals doing Bariatric surgery

Method: The data from case files of 1223 patients who underwent Lap Bariatric surgery was reviewed for parameters like Type of surgery, Mortality ,Morbidity, ICU admissions, Reook surgery, Discharge time, Anaesthesia related complications, Demographic profile, and cost effectiveness. All data collected were statistically computed and compared.

Results: Lap Sleeve gastrectomy was the most common type of bariatric surgery performed 86 % (1057 pts) followed by Gastric Bypass and revision surgeries with 0% mortality and 1% morbidity. 3 patients had gastric leak which was detected within 24hrs after surgery and were treated with immediate lap leak closure. 7 patients had relook surgery for bleeding problem. 40% of the patients were Diabetic having surgery done for metabolic syndrome. 7% of patients were below 20 years old making Adolescent surgery on the rise because of 40% of school children in the UAE being Obese. 28% of the patients were greater than 50 BMI.

The average discharge time was less than 36 hours for 90% of patients. The average cost of Bariatric surgery in the UAE was less than 10,000 dollars.

Conclusions:

MEDCARE hospital DUBAI is one of the few hospitals in the world performing more than 1200 cost effective Bariatric surgeries annually with the least morbidity and zero mortality. Short surgical time with most of the surgeries done with three ports and no drain has helped our patients to recover fast and discharged earlier. Fast track Anesthesia with early recovery after surgery coupled with adequate pre op preparation also contributes to the success. Burying the staple line with serosal suturing leads to minimal gastric leak and other complications after surgery. In short the Bariatric surgery programme at our hospital is of superior quality and in par with some of the best hospitals in the world.

O.580 LONG-TERM RELATIONSHIP BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND REFLUX DISEASE: A RETROSPECTIVE ANALYSIS IN ONE HUNDRED CONSECUTIVE PATIENTS

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Introduction: Laparoscopic sleeve gastrectomy (LSG) has become a popular one-stage bariatric procedure with a proven effectiveness on weight loss. However, the relationship between LSG and reflux disease is still unclear and remains subject of debate.

Objectives: To determine the long-term effect of LSG on symptomatic reflux disease and the use of proton-pump inhibitor (PPI).

Methods: A single center, retrospective analysis on 100 consecutive patients who have undergone a LSG between January 2005 and March 2009 was performed. The effect of the procedure on the relationship between preoperative and postoperative reflux symptoms and PPI dependency was analyzed.

Results: At the end of the study period (March, 2015), we achieved a mean follow up of 8.48 (6.1-10.3) years. A significant increase in subjective reflux symptoms and PPI use was observed. The number of patients who complained from reflux symptoms was 18% preoperatively and 43% at the end of the study period. PPI dependency was respectively 16% and 40%. This means an increase with a factor 2.4 and 2.5 respectively. In our study, the chance of postoperative development of reflux symptoms is 44% (32/73). In the postoperative period, 25 % (18/72) of patients who did not receive PPI preoperatively became PPI dependent.

Conclusion: We observe a significant increase in reflux symptoms and PPI dependency after LSG and new onset of reflux symptoms in up to 45% of the study population.

O.583

COSTS OF BLEEDING AND LEAKS AFTER SLEEVE GASTRECTOMY (LSG)

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Background: Bleeding and leaks are serious postoperative complications after LSG: diagnostic and therapeutic measures, days of hospitalization, parenteral feeding, number of blood products and antibiotics should be considered analyzing the cost-effectiveness of staple line reinforcement.

Methods: 396 patients underwent LSG without reinforcement of the staple line from March 2013 to February 2015. Data on mean BMI, hypertension (HT), type 2 diabetes mellitus (T2DM), dyslipidemia, obstructive sleep apnea syndrome (OSAS), ischaemic heart disease, gastric leak, previous bariatric surgery, mean hospital stay and blood products consumption were calculated after primary surgery and at re-admission only in the bleeding group.

Results: 22/396 (5.6%) patients required blood transfusion, with a mean “pro-capite” consumption of 2.1 ± 1.5 products after primary surgery versus 2.3 ± 1.6 during the re-admission. 36.4% patients with bleeding had OSAS, 27.3% T2DM, 22.7% dyslipidemia, 45.5% HT, 4.5% ischaemic heart disease, 18.2% previous bariatric surgery, 18.2% gastric leak, mean BMI = 47.6 ± 9.8 kg/m². In patients with bleeding mean hospital stay at primary surgery was 5.3 ± 2 days versus 50.6 ± 93.3 days at re-admission. Mean bleeding/prolonged hospitalization additional costs were € 4870 after primary surgery and € 75690 at re-admission.

Conclusion: Primary higher costs due to staple line reinforcements can be affordable when they reduce complication rates.

O.604

SLEEVE GASTRECTOMY BY SILS & NOTES FOR TUBULAR. TECHNICAL CONSIDERATIONS

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Background: Less invasive techniques have recently arisen. The sleeve gastrectomy is a procedure that allows trying to reduce the number of trocars, making it suitable for NOTES and SILS approaches.

Methods: The patient in supine position with opened legs. 12 mm trocar is at the umbilicus for a 30° scope and a 12mm transvaginal trocar (entry for a flexible endoscope), additional trocars of 2mm (epigastric and right flank) were placed. The SILS platform at the umbilicus allows three trocars (12mm and two of 5mm). Dissection of the greater curvature was made from 4 cm from the pylorus to the angle of His. The endoscope provides an image with less definition and in parallel to the instruments; the SILS device allows high-definition cameras. 2mm instruments may lack of strength, for the SILS approach roticulated instruments were used. A 32Fr foucher calibrated the gastrectomy. Reinforced mechanical sutures were used. Placement of additional trocars may be necessary to carry out the section of the fundus for both techniques. The extraction was made through the vagina or the umbilicus. The colpotomy was closed with separate knots and the fascia of the abdominal wall with a running suture.

Results: The laparoscopic assistance is required to perform a sleeve gastrectomy by transvaginal or SILS approach. Additional trocars may be necessary to complete the surgical procedure.

Conclusions: Technological improvements must be developed to improve visualization and facilitate dissection maneuvers. The transvaginal and SILS approach are feasible and safe in experienced hands, but lacks universal application.

O.607

PREDICTING POSTOPERATIVE COMPLICATIONS AFTER BARIATRIC SURGERY: THE BARIATRIC SURGERY INDEX FOR COMPLICATIONS, BASIC

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Background: Although bariatric surgery is relatively safe, around 20% of the patients suffer from short and/or long term complications. The aim of this study was to develop a scoring system for the risk of postoperative complications: the Bariatric Surgery Index for Complications (BASIC).

Methods: Twenty four possible risk factors were analysed in a database of all bariatric procedures between November 2007 and February 2015. Uni- and multivariate regression analysis was performed to identify variables predicting complications. Subsequently,

three categories were distinguished: class I (patients without risk factors), class II (one or two risk factors) and class III (three or more factors).

Results: Of the 1697 patients analyzed, 1385 (81.6%) were female. Median age was 45 years (18–68), median body mass index was 43.2 kg/m² (25.5–77.6). Complications developed in 271 (16.0%) patients, 194 (11.4%) occurring within 30 days. Multivariate analysis yielded five predictors: male gender; dyslipidemia; chronic obstructive pulmonary disease; anticoagulation use and revisional surgery. Class I consisted of 832 patients of which 110 (13.2%) had a complication, class II included 807 patients of which 143 (17.7%) developed a complication and class III consisted of 58 patients, 18 (31.0%) with a complication. These differences were statistically significant ($p < 0.001$).

Conclusions: The BASIC uses five preoperative variables to easily classify patients in a low, intermediate and high risk group for postoperative complications after bariatric surgery. Since this model lacks external validation its clinical relevance is still limited.

O.608 IMPLEMENTATION OF A MULTIMODAL ANALGESIA PROTOCOL REDUCES NARCOTIC REQUIREMENTS AND RELATED COMPLICATIONS IN PATIENTS UNDERGOING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Bariatric patients are at high risk of narcotic-related side effects. We hypothesize that a multimodal analgesia protocol could reduce narcotic use and its related complications whilst maintaining effective pain relief in patients undergoing laparoscopic sleeve gastrectomy.

Methods: We conducted a retrospective review of 156 consecutive patients who underwent laparoscopic sleeve gastrectomy from May 2010 till November 2014. A multimodal analgesia protocol consisting of pre-emptive etoricoxib, together with post-operative scheduled intravenous paracetamol, and intravenous tramadol for breakthrough pain was implemented in April 2013. Prior to that, analgesic regimes were prescribed based on individual physician preference. 90 and 62 patients formed the pre and post-protocol groups respectively. Patient data was extracted from both hard-copy and electronic medical records, and analyzed using SPSS v22.

Results: There were no differences in patient demographics except for hypertension history. There was a significant reduction in total narcotic use from 81.9mg of oral morphine equivalent (OME) pre-protocol, to 43.6mg of OME post-protocol ($P < 0.001$). Correspondingly, there was a significant increase in total paracetamol use from 3406.8mg pre-protocol, to 6195.6mg post-protocol ($P < 0.001$). Pain scores, drug costs, and length of stay were comparable. Narcotic related complications were significantly reduced from 33.3% pre-protocol to 8.8% post-protocol ($P < 0.001$). Multivariate analysis confirmed that the reduction in narcotic related complications were independent of age, gender, ethnicity, body mass index and comorbidities.

Conclusions: The implementation of a multimodal analgesia protocol translates to better patient safety with reduced narcotic related complications, yet maintaining comparable post-operative pain scores, length of stay and drug costs.

O.609 BACTERIAL CONTAMINATION OF THE JEJUNUM IN PATIENTS RECEIVING A PRIMARY ROUX-EN-Y GASTRIC BYPASS

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Background: In recent times the microbes of the human gut are coming in focus of investigation. Little is known about the microbial flora of the small bowel, especially in obese patients. We undertook a microbiological screening of the Jejunum in gastric bypass patients. This was the first part of a planned longer lasting observation.

Methods: In 175 female unselected consecutive patients as well as in 175 male ones we took a simple swab of the mucosa of the jejunum 80 – 100 cm distal to the Ligament of Treitz when the Jejunum was incised for the anastomosis. Routine microbiological analysis was done. All operations were performed laparoscopically and there were no previous operations of the upper gastrointestinal tract.

Results: In roughly 30% of probes we found a bacterial contamination of the proximal Jejunum. All together 49 different germs could be identified. Included in this variety of germs were several pathogenic ones. Females presented up to three, males up to four different germs. Gender difference was not significant, although men presented a higher percentage of contamination. Postoperative infectious complications arose in about 1%, meaningless whether the bowel was contaminated or not.

Conclusion: To the best of our knowledge this is the first qualitative analysis of the bacterial flora of the Jejunum in obese patients receiving a gastric bypass. Contamination does not influence perioperative outcome. Further observation will hopefully help to answer questions concerning bacterial overgrowth in the long run.

ROBOTIC SLEEVE GASTRECTOMY AND DOR FUNDOPLICATION IN PATIENT WITH SYMPTOMATIC GERD**Muhammad Jawad**¹, Rena Moon¹, Andre Teixeira¹,*Department of Bariatric Surgery, Orlando Regional Medical Center, Orlando, FL, USA***Background:** 58 year-old female with body mass index of 42 kg/m² with severe symptomatic reflux and multiple comorbidities requiring weight loss surgery.**Methods:** Veress needle was inserted in left upper quadrant. Abdomen was insufflated. Trocars were inserted. Sleeve gastrectomy was performed in usual fashion with stapling along 34 French bougie-sized Edlich tube until high on fundus where extra room was left along the tube. Hiatal hernia was found at time of surgery and repaired primarily with figure of eight Ethibond suture. Sleeve staple line was oversewn with 2-0 Polysorb. Anterior fundoplication was performed by tacking remaining fundus over the gastroesophageal junction to right crura.**Result:** Post operatively the patient did well, UGI on postoperative day 1 did not show leak or reflux.**Conclusion:** In patients with severe reflux with morbid obesity unwilling or unable to undergo gastric bypass, sleeve gastrectomy with Dor fundoplication could be a viable alternative.**O.614
2 YEARS DATA INDICATE IMPROVED WEIGHT LOSS AFTER BANDED SLEEVE GASTRECTOMY IN A MATCHED PAIR ANALYSIS****Jodok Fink**¹, Goran Marjanovic¹, Natalie Hoffmann¹, Simon Kuesters¹, Claudia Laeßle¹, Gabriel Seifert¹, Ulrich T. Hopt¹, W. Konrad Karz²¹ *Department of General and Visceral Surgery, University of Freiburg, Germany*² *Department of General Surgery, University of Schleswig-Holstein, Campus Lübeck, Germany***Background:** Although patients achieve excellent weight loss after laparoscopic sleeve gastrectomy (LSG), weight regain due to sleeve dilatation is a relevant obstacle of this procedure. In our centre we perform banded sleeve gastrectomy (BLSG) as an option to counteract sleeve dilatation and ameliorate weight loss over time.**Methods:** In a retrospective matched pair analysis we analysed 38 patients who underwent BLSG using a MiniMizer[®] ring from January 2012 to September 2014. The ring was placed 5-6 cm below the gastro-esophageal junction. 38 patients who had previously undergone a conventional LSG were selected as matched pairs.**Results:** Mean preoperative BMI was 54,75 ± 7,14 kg/m² for BLSG and 53,73 ± 9,16 kg/m² for LSG, Mann-Whitney P=0.7004. Excess weight loss (%EWL) amounted to 61,04 ± 15,75 and 64,95 ± 12,69 % after BLSG and 56,41 ± 17,70 and 57,37 ± 17,78 % for patients with conventional LSG 12 and 14 months postoperatively (Mann-Whitney BLSG vs. LSG P=0.195 and P=0.113 after 12 and 14 months, resp.). Over the time course of 2 years, two-way ANOVA revealed a significantly better weight loss for patients with BLSG (P<0.05). There was no procedure-related mortality in either group.**Conclusions:** The direct comparison of %EWL in both groups after 1 and 2 years shows a better weight loss for BLSG by trend. The time dependent analysis of body weight loss with two-way ANOVA furthermore reveals a significantly improved weight loss over the course of two years, overall indicating an improved outcome for patients with additional MiniMizer[®] ring implantation.**O.626
THE IMPORTANCE OF DYNAMIC UPPER GASTROINTESTINAL BARIUM X-RAYS EXAMINATION IN BARIATRIC SURGERY****Romeo Florin Galea**¹, Florinela Catoi Galea², Emil Pop¹, Aurel Mironiuc¹, Stefan Chiorescu¹, Florin Mihaileanu¹, Ovidiu Grad¹, Doru Mircioiu¹*Second Surgical Clinic, Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania**Physiology Department, Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Romania***Background:** During 17 years (1997-2013), 1361 surgical procedures have been performed in the Bariatric Surgery Center from the Second Surgical Clinic of Cluj-Napoca consisting of 1111 silastic ring vertical gastroplasty (SRVG), 162 cosmetic interventions and 88 corrections. We had excellent results in 91.15% cases, 47 patients had an excessive weight loss and in 41 cases weight gain was noticed. These were the beginnings of bariatric surgery in Romania. Between 2013 and March 2015 we performed 53 surgical interventions of sleeve gastrectomy (SG) and 4 of gastric bypass, as first operation or as conversion from SRVG. The dynamic upper gastrointestinal (GI) barium X-rays examination has given us the tips for the surgical indication as well as for the postsurgical follow-up in order to improve the surgical technique.**Methods:** The radiographic examination has been done in a dynamic manner, with several images on the Röntgen screen giving us a more precise evaluation. The dynamic upper GI barium X-rays examination was able to indicate the positive evolution of the patients, but also, when the case, the presence of stoma stenosis, the rupture of the suture, enlargement of the gastric stoma or leaks.**Results:** Weight loss was 20 kg at 3 months and 40-50 kg at 6 months respectively, after sleeve gastrectomy. In 2 cases we had gastric fistula that have been resolved with an endogastric stent. In one case we had gastric enlargement with consecutive weight gain.**Conclusion:** We consider that, at the moment, sleeve gastrectomy is the best bariatric surgery procedure.

O.628**BARIATRIC SURGERY IN ADOLESCENTS, LONG TERM RESULTS - SAVING PRECIOUS YEARS**

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Introduction: Childhood Obesity has been a major public health problem among western civilization. Serious comorbidities are tightly linked with this condition in adolescents as well as a severe impact in self-esteem and quality of life. Long term studies from youth patients are lacking.

Objectives: The aim of this study is to evaluate the long term results of an obese adolescents cohort submitted to Bariatric Surgery and revise the rationale of an early approach of this population.

Methods: Between May 2001 and January 2013 we operated on 62 patients between 14 and 19 years old, with a mean weight of 126 Kg (89-188), and a mean BMI of 44 Kg/m² (35 - 70). There were 56 Gastric Bypasses (52 laparoscopic and 4 open), and 6 adjustable gastric banding.

Results: After ten years weight fell to 79 Kg and BMI to 29. Mean excess weight loss was 74%. We had two major post operative complications (1 subfrenic abscess and 1 intrabdominal hemorrhage). Long term complications included a few patients with cholelithiasis, anemia and gastroesophageal reflux. There was no mortality. Quality of life improved dramatically.

Conclusion: Adolescents have a great benefit from bariatric surgery and have a sustained weight loss pattern 10 years after surgery, with a great psychosocial outcome.

O.629**NEW THERAPEUTICAL OPTIONS FOR PATIENTS WITH POST-SURGICAL LATE DUMPING SYNDROME – GLP-1 WITH PREVIOUSLY UNREPORTED EFFECTS**

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Background: Late dumping syndrome is encountered in approximately 3-5% of patients after gastric bypass surgery. About 60 % of the affected patients benefit of modification of dietary behavior as first step of possible treatment cascade. The first medical assessment is Acarbose as an inhibitor of the enzyme α -glucosidase. As surgical option, restriction for slower emptying of the pouch may be performed through implantation of an outlet minimizer. But there are patients remaining, which do not profit of these proved therapeutically options.

In those patients we tried an innovative treatment with GLP-1 (Glucagon-like peptide 1) mimetic. Against doctrine, the use of GLP-1 mimetic showed a remarkable decrease in insulin secretion together with a better synchronization of corresponding glucose blood levels as measured by repeated oral glucose tolerance tests (OGTT)

Methods: Seven patients were treated with GLP-1. Diagnostic modalities included OGTT (oral glucose tolerance test) with simultaneous insulin and glucose level measurement. OGTT was performed at baseline (without GLP-1 treatment), with 0,6mg GLP-1 daily and subsequently with 1,2 mg GLP-1. Continuous glucose measurement was performed and evaluated.

Results: The hypoglycemic symptoms improved considerable in all patients. Six of those seven were even completely without dumping symptoms. The fasting and the postprandial insulin levels decreased remarkably and adapted much better to the glucose levels.

Conclusions: GLP-1 showed impressing first results in 7 patients suffering from post-surgical late dumping syndrome. More research about this GLP-1 synchronizing action with decreasing the released insulin levels must be done.

O.638**PREDICTIVE FACTORS FOR INSUFFICIENT WEIGHT LOSS AFTER BARIATRIC SURGERY AND THE INFLUENCE OF OBSTRUCTIVE SLEEP APNEA**

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Background: Aim of this study was to evaluate the percentage of excess weight loss (%EWL) between patients without and with obstructive sleep apnea (OSA), including all severity forms and continuous positive airway pressure (CPAP) compliance after bariatric surgery and providing predictive factors for insufficient weight loss ($\leq 50\%$ EWL) at one year follow-up.

Methods: All consecutive patients, who underwent primary laparoscopic Roux-en-Y gastric bypass or laparoscopic sleeve gastrectomy between 2006 and 2014, were retrospectively reviewed. Patients with data on apnea-hypopnea-index (AHI) and pre- and postoperative body mass index (BMI) were included. After surgery, %EWL was compared between OSA-, subdivided in mild, moderate and severe OSA, and non-OSA patients. Multivariable logistic regression analysis according to the TRIPOD statement evaluated predictive factors for $\leq 50\%$ EWL.

Results: A total of 816 patients, of which 522 (64%) with- and 294 (36%) without OSA, were included. One year after bariatric surgery, OSA patients had less %EWL than patients without OSA (65.5 versus 70.3, $p<0.01$). The lowest %EWL was seen in moderate (65.4%) to severe (61.7%) OSA patients, without effect of CPAP compliance. Gender, age, preoperative BMI, preoperative AHI, type of surgery and type II diabetes were included in the multivariable model for $\leq 50\%$ EWL (area under the curve 0.778).

Conclusions: Significant less %EWL is seen in OSA patients, one year after bariatric surgery. In addition, the AHI is included in the multivariable prediction model for $\leq 50\%$ EWL.

O.641 GASTRIC BYPASS IMPROVES SUBCLINICAL NEPHROPATHY IN NON-SEVERELY OBESE PATIENTS (BMI <35KG/M²) WITH TYPE 2 DIABETES MELLITUS

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Background: Bariatric surgery results in high remission rates of type 2 diabetes mellitus (T2DM) in obese patients. We have previously shown that Roux-en-Y gastric bypass (RYGB) improves diabetic neuropathy, likely due to a reduction in nitrosative stress. The purpose of this study was to investigate whether RYGB is also able to improve diabetic nephropathy.

Methods: Twenty patients (body mass index (BMI) between 25-35kg/m²) with poorly controlled, insulin-dependent T2DM were enrolled. All patients were treated with a standardized RYGB. Changes in serum creatinin levels, urinary albumin excretion and total serum adiponectin were measured. High-molecular weight (HMW) adiponectin as a sensitive marker for nephropathy was measured in serum and urinary samples using ELISAs. Data are presented as mean \pm SEM.

Results: Serum creatinin levels decreased within 3 months from 0.82 ± 0.05 mg/dl to 0.67 ± 0.03 mg/dl ($p<0.05$) and remained at these levels for 24 months. The urinary albumin/creatinin ratio started decreasing within 3 months and reached significantly lower levels after 6 months (2.38 ± 0.86 mg/mmol to 1.15 ± 0.17 mg/mmol, $p<0.05$). Similarly, urinary HMW adiponectin decreased over the 24 month follow-up period (0.185 ± 0.074 ng/ml to 0.074 ± 0.014 ng/ml, $p<0.05$). In contrast, total serum adiponectin showed a significant increase over the same period whereas serum HMW adiponectin did not change.

Conclusions: RYGB appears to improve microvascular complications of T2DM such as subclinical nephropathy and neuropathy in non-severely obese patients. Further research should investigate by which mechanisms diabetic nephropathy is improved in these patients.

O.642 GASTRIC BYPASS IMPROVES GLYCEMIC CONTROL AND REDUCES SYSTEMIC INFLAMMATION IN PATIENTS NON-SEVERELY OBESE PATIENTS (BMI<35KG/M²) WITH TYPE 2 DIABETES MELLITUS

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Background: Bariatric surgery has been shown to improve type 2 diabetes mellitus (T2DM) in obese patients. For this study we investigated the ability of Roux-en-Y gastric bypass (RYGB) to improve glycemic control in non-severely obese patients and the effects on systemic cytokine levels.

Methods: Twenty consecutive patients with a body mass index (BMI) between 25-35kg/m² and poorly controlled, insulin-dependent T2DM were enrolled. All patients were treated with a standardized RYGB. Parameters of glycemic control, serum and isolated circulating monocytes were collected over 24 months. Cytokines in the serum were analyzed using ELISAs and monocyte gene expression was determined using real-time PCR. Data is presented as mean \pm SEM.

Results: HbA1c and fasting glucose decreased from $8.5 \pm 0.3\%$ to $7.0 \pm 0.3\%$ ($p<0.05$) and 201 ± 16 mg/dl to 128 ± 7 mg/dl ($p<0.05$), respectively. Daily insulin and metformin use decreased from 81.6 ± 10.6 IE to 4.7 ± 1.8 IE ($p<0.05$) and 1125 ± 222 mg to 782 ± 191 mg ($p=0.2$). Serum TNF, IL-1 β , CCL-2 (MCP-1), and C-reactive protein all significantly decreased while IL-4 and IL-13 showed a significant increase. Corresponding to these changes in systemic cytokine levels, inflammation related genes (NFkB p65, TNF- α and VEGFA) showed a significant decrease over time in circulating monocytes. Furthermore, genes of the antioxidant defense (Glyoxalase I and HSP4) and mitochondrial genes (mtCOI) decreased over the study period.

Conclusions: RYGB improves glycemic control and reduces insulin use in patients BMI<35kg/m² with T2DM. These changes are associated with a decrease and reprogramming of the systemic inflammation.

O.644 LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) ALLOWS BETTER RESULTS THAN EXPECTED AT 10 YEARS: A PROSPECTIVE STUDY OF OVER 200 CONSECUTIVE PATIENTS WITH COMPREHENSIVE FOLLOW UP.

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Background: LAGB is more and more abandoned in favour of sleeve gastrectomy and Roux Y Gastric Bypass (RYGB), because it is considered as a transitory solution with a high complication rate. Nevertheless few long term data with a comprehensive follow up are available.

Methods: We conduct a prospective cohort study in a tertiary center also performing sleeve gastrectomies and RYGB since 1997. Were considered herein patients operated before 2005 with at least 10 years follow up. Clinical (weight, blood tension, diabetic status, cardiovascular Framingham risk score) and biological parameters (fasting glucose, HbA1c, lipid profile) were collected prospectively preoperatively and at 1, 2, 5 and 10 years.

Results: LAGB has been placed in 210 consecutive patients (Baseline weight: 134±23kg, 84% women, 53 ± 11 years old). The follow up rate at 5 years was 98.6% and at 10 years was 88%.

Percentage of weight loss 1, 5 and 10 years after banding were respectively 15.5±8.3, 21.8±12.7 and 21.9±15.4.

Removal of the band was performed for insufficient weight loss in 18 patients after a mean time of 68 +/- 30,1 months and in 14 patients for complications (9 gastric erosions, 1 slippage).

Considering the 36 (25%) diabetic patients (HbA1c was 7,91+/-1,41) at baseline, diabetes remission was obtained in 35.3% at 5 years and 23.0% at 10 years. When diabetes persisted, glycemic control was improved illustrated by a lower HbA1c (HbA1c was 6,97+/-0,89 at 5 years and 7,35+/-1,05 at 10 years).

Among normoglycemic patients at baseline only 29.3% became glucose intolerant and 4.9 % diabetic after 10 years.

Conclusion: LAGB can offer long term satisfying weight loss and comorbidities remission and prevention under the condition of an accurate follow up.

O.648 **COMPARISON BETWEEN LENGTHENING OF THE ALIMENTARY VERSUS THE BILIOPANCREATIC LIMB FOR FAILED ROUX-EN-Y GASTRIC BYPASS**

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Background: Weight regain after Roux-en-Y gastric bypass (RYGB) is increasingly documented. Surgical salvage operation consists of either adding restriction or increasing malabsorption. In the latter, both alimentary limb lengthening (ALL) and biliopancreatic limb lengthening (BPLL) have been described.

Methods: All RYGB revisional malabsorptive procedures performed in our hospital from 2011 to 2015 were retrospectively investigated. Patient characteristics, surgical details and results were analyzed.

Results: Thirty-five patients (mean age 46) were identified. In 16 patients ALL was performed (69% laparoscopically). Nineteen patients received BPLL, all performed laparoscopically. The mean interval time between RYGB and distalization was 8.5 years for ALL and 6.4 years for BPLL. There were two revisions (one subcutaneous bleeding, one perforation). Mean length of stay was 2.8 days. Median excess weight loss in the ALL group was 15.5 %±23.8% versus 48 %±14.0% in the BPLL group.

Conclusions: Preliminary results show that lengthening of the BPlimb is providing more successful additional weight loss after failed RYGB compared with lengthening of the alimentary limb. However follow-up is short and long-term evaluation of nutritional deficiencies are to be awaited.

O.649 **INCREASED FASTING BLOOD GLUCOSE IS INDEPENDENTLY ASSOCIATED WITH DISEASE PROGRESSION AFTER INITIAL REMISSION OF ADVANCED NAFLD FOLLOWING BARIATRIC SURGERY.**

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Background: The evolution of liver histology after early remission of advanced NAFLD following bariatric surgery represents a unique opportunity to explore the natural progression of NAFLD and its determinants.

Methods: A total of 82 severely obese patients with advanced NAFLD at the time of surgery (NAFLD activity score: NAS≥3) who underwent sequential liver biopsies prior to surgery and at 1 year and 5 years after surgery were enrolled. Remission of advanced NAFLD was defined as NAS<3 at 1 year, and disease progression was defined as an increase of NAS between 1 and 5 years.

Results: At 1 year, 66 (80%) patients achieved remission of advanced NAFLD. Among those, NAFLD progression occurred in 22 (33.3%) patients at 5 years. At baseline and 1 year, clinical, biological, and NAFLD histological parameters were not different between patients with or without disease progression. At 5 years, weight regain was observed in 5 (22.7%) patients without progression and in 17 (77.3%) patients with progression (p<0.01). Metabolic traits including HbA1c (P<0.05), fasting blood glucose (P<0.001), HDL (P<0.05), were significantly worsened between 1 and 5 years after surgery in the progression group. In multivariate analysis, changes in

fasting blood glucose ($P=0.036$) and AST level ($P=0.024$) between 1 and 5 years were associated with disease progression at 5 years, independent of weight.

Conclusions: In patients with advanced NAFLD, disease progression after initial remission following bariatric surgery is independently associated with impaired glucose control.

O.650

GASTRIC BYPASS IMPROVES STEATOSIS AND STEATOHEPATITIS IN PATIENTS BMI <35KG/M² WITH TYPE 2 DIABETES MELLITUS

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Background: Type 2 diabetes mellitus (T2DM) and non-alcoholic fatty liver disease (NAFLD) are increasingly understood as related diseases. T2DM and NAFLD appear to propagate each other and insulin resistance may be the pathogenetic link between these two diseases. Bariatric surgery reduces steatosis, steatohepatitis and even fibrosis in obese patients. The purpose of this study was to investigate whether RYGB in patients with a body mass index (BMI)<35kg/m² is able to improve liver damage in diabetic patients.

Methods: Twenty patients (body mass index (BMI) between 26-35kg/m²) and poorly controlled, insulin-dependent T2DM were enrolled. All patients were treated with a standardized RYGB. Intraoperative and follow-up liver biopsies 36 months after RYGB were histologically assessed by a pathologist using the NAS-score. Changes in liver function tests, glycemic control and insulin resistance using the HOMA-model were determined preoperatively and after 36 months. Data are presented as mean±SEM.

Results: BMI dropped from 32.80.5kg/m² to 24.5±0.7kg/m² ($p=0.0005$) after 36 months. Alanine-aminotransferase (ALT) and γ -glutamyl transferase (GGT) both significantly improved over the 36 month follow-up period (ALT: 36.8±3.2U/l to 21.1±1.6U/l, $p=0.006$; GGT: 55.2±9.7U/l to 22.1±5.2U/l, $p=0.008$) while Aspartate-transaminase (AST) remained unchanged. Liver histology showed a reduced steatosis and inflammation. Insulin resistance also significantly improved (HOMA-IR: 19.2±2.8 to 4.9±0.8, $p=0.004$).

Conclusions: RYGB improves NAFLD and insulin resistance in diabetic patients with a BMI <35kg/m².

Further research should investigate by which mechanisms RYGB improves NAFLD and how these changes relate to T2DM.

O.654

INTERNAL HERNIA AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: CORRELATION BETWEEN CT IMAGING AND OPERATIVE FINDINGS

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Background: Although internal hernia after laparoscopic Roux-en-Y gastric bypass (LRNYGB) is well-known by bariatric surgeons and radiologists, accurate diagnosis remains difficult. Most surgeons advocate a low threshold for CT-scan and when in doubt laparoscopy/-tomy. The aim of this study was to compare the radiological diagnosis and the operative findings in patients undergoing explorative laparoscopy for abdominal pain after antecolic LRNYGB.

Methods: A retrospective analysis of all LRNYGB patients who underwent an explorative laparoscopy between January 2007 and August 2012 has been performed. Radiological and operative reports were compared.

Results: An explorative laparoscopy for abdominal pain after antecolic LRNYGB was performed in 119 patients, of which 105 had a preoperative CT-scan. Seventy-four patients suffered from an internal hernia (45 at the Petersons space, 20 at the jejuno-jejunostomy, 9 at both sites), 21 suffered from adhesions, 15 had stigmata of chronic friction of the mesodefects and 9 had a negative exploration. Eight patients (6,7%) required a conversion. No bowel resections had to be performed. Twenty-three (39,6%) patients had a false negative CT-scan, 10 (21,3%) had a false positive one. For detection of an internal hernia, CT-scan had an overall sensitivity of 61.7% and specificity of 77.8% in our population.

Conclusions: Internal hernia after antecolic LRNYGB remains a difficult diagnosis. CT can help confirm the diagnosis, but a high index of suspicion with a low threshold for explorative laparoscopy/-tomy remains the cornerstone of good treatment.

O.657

CLOSED-LOOP GASTRIC ELECTRICAL STIMULATION (CLGES) WITH BEHAVIORAL FEEDBACK FOR TREATMENT OF OBESITY: PROSPECTIVE MULTICENTER TRIAL WITH 18 MONTH FOLLOW-UP

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Background: The CLGES (abiliti[®]) system detects consumption, and in response delivers tailored gastric stimulation, targeting a region of high vagal innervations, to explore the role of vagus nerve modulation for treatment of obesity. The onboard sensors record eating and activity behavior (24/7). We present 18 month (18M) weight loss maintenance and safety during an observation period following a 12 month (12M) randomized multicenter trial comparing CLGES to laparoscopic adjustable gastric band.

Methods: 106 obese participants were implanted with the CLGES system and 97(92%) completed 12M study. Weight-loss(WL) and safety results were analyzed in 79(75%) participants remaining in observation at 18M with bimonthly follow-ups that included stimulation adjustment and review of sensor data.

Results: The WL was stable from 12 to 18M, mean %WL 13.6±7.5 to 14.6±8.5 (p=0.55), and mean percent excess weight loss(%EWL) 35.1±19.7 to 37.0±20.9% (p = 0.83). The percentage of patients achieving %EWL > 25% was 66% at 12M, and 71% at 18M. Incidence of serious device/procedure related adverse events continued to be low, 4.7%(5/106) at 12 M, and 5.7%(6/106) at 18M due to one device replacement due to damaged lead.

Conclusions: During the 18M follow-up, CLGES was shown to produce stable WL, low patient dropout, and continued good safety outcome. We suggest the results can be attributed to the combination of CLGES and objective sensor based behavior data which exploits the Hawthorn effect and provides an effective tool to clinician for aftercare. The study supports CLGES as a low-invasive treatment with potential for long term health benefits.

O.665

DEFINITIVE LAPAROSCOPIC SURGERY FOR CHRONIC GASTRIC FISTULA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG)

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Background: Laparoscopic sleeve gastrectomy is a restrictive operation that is gaining popularity. Its most feared complication is a staple line leak.

The treatment modality depends on timing, clinical and anatomical considerations. If fistula persists, a definitive surgical procedure is often required.

Patients and methods: We collected prospectively all cases with chronic gastric fistula after LSG who failed various conservative treatments and required either total or partial gastrectomy with R-Y gastro/esophago-jejunostomy or R-Y fistulojejunostomy.

Results: 11 patients underwent definitive operation. Seven patients had total gastrectomy with R-Y esophagojejunostomy, one patient had partial gastrectomy with R-Y gastrojejunostomy, and 3 patients had R-Y fistulojejunostomy. Mean number of treatment attempts before surgery with stents, clips, glue, and drains before the definitive operation was 4.4 (2-15).

The average period of time elapsed from the LSG to the operation was 8 (5 weeks-24 months). The average length of stay was 11.9 days (4-15). Average operative time was 2.4 hours (2:10-4:35) without conversions or leaks. All healed completely after definitive operation. Only one patient had post op bleeding followed by rehospitalization on POD 7 for drainage of infected hematoma.

Conclusion: These operations are feasible by laparoscopic techniques in experienced hands, and should be performed as soon as the fistula is established.

O.666

EFFICACY OF SURGICAL TREATMENT OF TYPE 2 DIABETES IN GRADE I OBESITY AFTER SLEEVE GASTRECTOMY WITH ILEAL INTERPOSITION OR GASTRIC BYPASS.

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Background: Roux-en-Y Gastric Bypass (RYGB) has been the most accepted surgical option in diabetics, but the Sleeve Gastrectomy with Ileal Interposition (II-SG), emerged as option for patients with type 2 diabetes in lower BMIs. This study aims to evaluate efficacy and safety of II-SG and RYGB in the treatment of T2DM associated with grade I obesity.

Methods: A retrospective study in a population of type 2 diabetic patients divided into 2 groups was performed: group I underwent II-SG and group II, RYGB, comparing clinical and laboratory variables in the pre- and postoperative period from January 2002 to September 2013.

Results: Group 1: Remission of type 2 diabetes was 33.3% (n = 3), glycemic control without drugs was obtained in 44.4% (n = 4), and independent of medications in 55.5% (n = 5). There was a reduction of 100% of the excess weight and BMI reduction of 8.66. Group 2: Remission of type 2 diabetes happened in 48.1% (n = 13), glycemic control without drugs in 74.1% (n = 20), and independent of

medications in 92.6% (n = 25). There was reduction of 96.68% of the excess weight and BMI reduction in 8.07. There was no mortality or malnutrition. There was one case of fistula in the His angle in II-SG the group.

Conclusions: II-SG is a safe and effective option for the treatment of type 2 diabetes associated with obesity class I, showing no superiority to RYGB. More prospective and larger studies are needed to confirm those findings.

O.676

THREE-PORT LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY: OUR EARLY EXPERIENCE

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Background: Sleeve gastrectomy is traditionally performed with the aid of 5 to 7 abdominal trocars. By reducing the number of trocars, parietal trauma, pain and hernia risks can be minimized. We present our early experience concerning laparoscopic sleeve gastrectomy for morbid obesity, with a more minimal invasive approach, using three port- trocars.

Methods: Fifteen cases of sleeve gastrectomy for morbid obesity were retrospectively analysed, in terms of trocar placement and postoperative outcomes. The typical position of the trocars included one periumbilical of 10mm for a camera of 30°, and another two trocars of 12mm on the right and left midclavicular lines, respectively. The procedure includes percutaneous insertion of a stitch under direct laparoscopic vision which is fixed to the right crus of the diaphragm. Careful traction of the stitch lifts the left lobe of the liver offering better surgical field and access to the gastroesophageal junction without any liver retractor. A gauze is used to protect liver parenchyma from possible injury. All patients are followed-up every six months for evaluating weight loss and quality of life.

Results: All the patients had an uncomplicated recovery. No liver injury or wound problem was mentioned.

Conclusions: The placement of a stitch at the right crus of the diaphragm can reduce the number of trocars, leading to less postoperative pain, risk of hernia and better aesthetic outcome without compromising the safety of the operation, or the rate of postoperative complications.

O.683

SCINTIGRAPHIC ASSESSMENT OF GASTRIC EMPTYING AFTER SLEEVE GASTRECTOMY

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Introduction: Radionuclide scintigraphy provides a standard physiologic evaluation of gastric emptying (GE) after Laparoscopic Sleeve Gastrectomy (LSG). This operation could be associated with motor gastric dysfunction and abnormal GE.

Objectives: Evaluate the short term effect of LSG on GE quantitative indices for liquids and solids compared with preoperative results.

Methods: Forty obese patients were divided into two equal groups, liquid and solid groups. ^{99m}Tc-sulfur colloid GE scintigraphy was performed for all patients submitted to LSG before and after surgery (1-4 weeks for liquids and 4-6 weeks for solids). The quantitative indices included half emptying time (T1/2) and percent gastric retention at 15, 30 and 60 min for liquids and at 30, 60, 90 and 120 min for solids. A modified technique was used to label a boiled egg to be tolerable by patients

Results: T1/2 was significantly enhanced after LSG compared to base line study (25.3±4.4 vs 11.8±3.0 min for liquids and 74.9±7.1 vs 28.4±8.3 min for solids, respectively; p<0.001). Percent of gastric retention in operated patients was significantly less than base line study for liquids at 15, 30 and 60 min (33.9±5.6%, 17.7±3.9% and 7.5±2.8% vs 69.4±10.5%, 55.6±14.95 and 26.1±4.7%, respectively; p<0.001) as well as for solids at 30, 60, 90 and 120 min (42.0±11.1%, 20.8±6.1%, 11.0±5.9% and 3.8±2.7% vs 79.9±8.7%, 67.4±12.2, 37.0±10.9% and 13.8±4.4%, respectively; p<0.001).

Conclusion: The significant acceleration of gastric emptying for liquids and solids is an important contributing factor for the the rapid early weight loss after LSG.

O.686

BARIATRIC SURGERY-ASSOCIATED COMPLICATIONS – STATISTICAL EVALUATION OF 11.386 PATIENTS WITH MAZIMOI ODS 3 SOFTWARE

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Background: Mazimoi Obesity Documentation System (ODS) 3 has evaluates data of 11.386 patients in WHO obesity stage III closely tracked for a period of up to 12 years.

Methods: Mazimoi ODS 3 is a multi-language, multi-user web-based software to collect and analyze data from obese patients for unlimited periods. Throughout a period of 3 years, medical data of obese patients have been either collected or imported and analyzed anonymizedly.

Results: Whereas only 3 % of all gastric banding procedures showed complications at all, gastric bypasses showed 13 % of all complications in the intraoperative context and 46 % versus 41 % of peri- versus postoperative complications leading to a figure of

about 6 % of complications. SCOPINARO's and LARRAD's procedures both showed 4 % of peri-operative complications each, whereas SANTORRO's procedure let identify 5 % of complications in the intra-operative setting. Sleeve gastrectomies showed 3 % of its complications in the intra-operative and 8 % in the peri-operative setting. Omega loop bypasses let identify the same number of intra- as well as peri-operative complications (6 % each).

Conclusions: The kind and number of intra-, peri-, and post-operative complications within a patient population of 11.386 (obesity stage III WHO classification) show typical clusters which can be used for predicting the relative probability of their developing surgery-associated complications.

O.687 MAZIMOI OBESITY DOCUMENTATION SYSTEM (ODS) 3 – A MULTILANGUAGE WEB-BASED OBESITY DATA COLLECTION AND ANALYSIS SYSTEM

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Background: Data collection and analysis are mandatory aspects of modern quality assurance and outcome evaluation. The software Mazimoi Obesity Documentation System (ODS) 3 is one of merely a few instruments worldwide delivering even more standards, workflow, and functionality than usually available.

Methods: Mazimoi ODS 3 is a web-based software using a combination of a web server, database server software, and a programming interface software. The anonymized export of arbitrarily selectable patients' data (single, cohorts, etc.) renders the system capable of closely cooperating with any quality assurance institution.

Results: Mazimoi ODS 2 has been installed with customers within Germany, Austria, Italy, and Portugal. For a period of 2 years, more than 10.000 patients have been documented, so far. On a general basis (85 %), the software's users commonly describe its ease of use and profit from the standards provided within. Its graphical users interface has been described by 91 % of the users as logical and stringently following an internal workflow. 92 % of all users liked especially both the data import module and the time scheduling system for their patients' ambulatory visits.

Conclusions: The use of a modern software system, especially web-based, with all necessary implementations for both data safety and security these days is mandatory for tracking both the outcomes and possibly also the failures of medical diagnostics and treatment.

O.693 THE CHANGING FACE OF BARIATRIC SURGERY. ARE WE DELIVERING BETTER RESULTS FOR OUR PATIENTS?

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Background: There is debate over what is the ideal bariatric procedure. Our unit has seen significant change in practice over the last 13 years with Roux-en-Y gastric bypass and loop gastric bypass surgery replacing gastric banding and sleeve gastrectomy respectively. Has our change in practice led to better patient outcomes?

Methods: Between 2001 and 2014 the number and type of procedure, average weight and BMI at presentation, excess weight loss at one and two years post surgery and reduction in BMI at one and two years post were analysed used the Pearson correlation in SPSS.

Results: Over the time course of the study there was a significant increase in the number of total operations ($r=0.9, p=0.001$), bypasses ($r=0.87, p=0.001$), loop bypasses ($r=0.64, p=0.014$) and sleeve gastrectomies ($r=0.59, p=0.024$). No significant change was seen for gastric banding. EWL at one and two years post surgery significantly increased over time (EWL1 $r=0.9, p=0.001$, EWL2 $r=0.91, p=0.001$). Reduction in BMI at one and two years post surgery significantly increased over time ($r=0.79, p=0.01/r=0.8, p=0.01$).

Conclusions: Significant changes in the types of surgery offered to patients occurred over the time course of the study. Initially gastric banding was the most common procedure but this has largely been replaced by gastric bypass surgery. In the final seven years of the study sleeve gastrectomy and loop gastric bypass surgery were introduced. Despite significant changes in surgical practice we have been able to delivery consistently good results with improved average weight loss observed year on year.

O.695 SLEEVE GASTRECTOMY IN TYPE 2 DIABETIC OBESE PATIENTS

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Background: The relationship between obesity and type 2 diabetes mellitus (T2DM) is well known. Morbidly obese patients with T2DM who undergo bariatric surgery have improvement or remission of their diabetes. We report our results in terms of type 2 diabetes (T2DM) control in obese patients after laparoscopic sleeve gastrectomy (LSG), analyzing the excess weight loss percentage (EWL%),

metabolic performance after surgery, and morbi-mortality. The aim is to evaluate the results of metabolic control in the treatment of obese patients with T2DM undergoing LSG.

Methods: A prospective series of obese, well-controlled T2DM patients underwent LSG consecutively between April 2006 and December 2014.

Results: 112 patients, 75 male and 37 female, mean age 51 years (24-70), were operated upon and underwent follow-up for a mean of 24 months (4 - 46). Mean preoperative BMI versus follow-up BMI were 36.22(30.2-51) and 27.92 (21.3-35), respectively, and the mean EWL% was 77.53 %. Mean preoperative fasting glucose levels and HbA1C decreased from 147,28mg% (84-250) to 94,35mg% (70-120) and from 7.0 % (5.2-11.6) to 5.78% (5.3-6.9), respectively. At follow-up, 89% of patients did not require further oral treatment for diabetes, while 11% witnessed a significant decrease in dosage of medication and/or were being progressively tapered off of medication. There were 2 postoperative bleeding (1,8%).No mortality.

Conclusions: LSG is a safe and an effective treatment for mild and well-controlled T2DM patients, achieving very good metabolic control. Further follow-up is necessary to evaluate long-term results and may provide valuable information in optimizing patient selection for this procedure.

O.696

TREATMENT OF LEAKS AFTER GASTRIC BYPASS WITH ENDOSCOPIC STENTING

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Background: Gastric leak is one of the most serious complications after bariatric surgery, associated with high morbidity and mortality, which can be treated by support therapies, endoscopy and/or surgery. Stenting of the leak site is one tenet of endoscopic treatment with good results despite the fact that stent models are not developed to surgical anatomy. The aim of the present study is to evaluate therapeutic aspects of endoscopic stenting of leaks after Roux en Y gastric bypass (RYGB), association between time of healing and early use of stent.

Methods: Retrospective study of 103 patients with leaks after bariatric surgery. Eighteen of these patients received treatment for leak after Roux en Y gastric bypass through endoscopic stenting, between 2002 and 2014.

Results: Twenty-two stents were used and remained on site for 31.7±14.7 days. Average age was 39.72 years (31-57) and Body Mass Index of 42.79 Kg/m² (35.33-62.24). Time between fistula and stenting had a mean of 22.9±27.0 while the time of fistula diagnosis happened 6.3±3.9 after surgery. Stents used were self-expandable plastic stents (61.9%), fully covered self-expandable metallic stents (23.8%) and partially covered (14.3%), with 27.7% migration rate. Success rate for fistula treatment was 94.4%.

Conclusions: Endoscopic treatment with stenting of fistulas after RYGB is feasible and safe, with high success rate. Shorter healing time was observed in patients that received early stents and had leaks under 10mm of diameter.

O.697

EVALUATION OF TCF7L2 EXPRESSION AFTER BARIATRIC SURGERY

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Background: TCF7L2 is a gene associated to T2DM and an association with obesity has been reported. We aim to assess the effects of bariatric surgery in TCF7L2 expression and associations with BMI and T2DM.

Methods: Blood samples were collected from 26 obese patients before bariatric surgery and one year after follow-up. The RNA was extracted using an automated system, and cDNA was synthesized using reverse transcriptase and posteriorly, real-time PCR was done.

Results: TCF7L2 genetic expression did not change after bariatric surgery, however, there was a decrease in the diabetic patients (27%). There was a trend toward difference between the diabetic patients that had some decrease in the genetic expression (81,88%) when compared with the non-diabetic (40%). Preoperative genetic expression of the diabetic patients was significantly higher when compared to the non-diabetic. There was a positive correlation between BMI and the delta-cycle threshold values of TCF7L2 in the pre and postoperative periods, meaning that the higher the BMI of the patients, the lower gene expression. There was a positive correlation between BMI loss and TCF7L2 genetic expression, meaning that the higher the BMI loss, the higher gene expression.

Conclusions: The TCF7L2 expression one year after surgery did not change for the entire group, in the diabetic patients there was a significant decrease. TCF7L2 expression was higher in diabetic patients before bariatric surgery. There was a correlation between BMI and the dCt values of TCF7L2 in the pre and postoperative periods. BMI loss was associated with increase in TCF7L2 expression.

O.702

ASPIRATION THERAPY IN SUPER OBESE PATIENTS – PILOT TRIAL

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Background: While bariatric surgery is the best option for weight loss in the super-obese population, patients with BMI > 50 kg/m² have a substantially higher rate of perioperative mortality. We evaluated a new device for the treatment of obesity, the AspireAssist® Aspiration Therapy Aspiration Therapy (Aspire Bariatrics, King of Prussia, PA) in super-obese patients BMI > 55 kg/m². Recent studies of AspireAssist in patients with initial BMIs of 35-55 kg/m² demonstrate not only high efficacy, but also an excellent safety profile.

Methods: From September 2012 to June 2014, 11 subjects (8 men, 3 women), average age 44,9 years (32-63 years) were enrolled at 3 centres. The mean initial weight of the subjects were 196,1 kg (143 to 290); the mean BMI 66,53 kg/m² (55 -80,4). Lifestyle intervention was provided as a 10-session diet and behavioral modification program.

Results: Mean weight loss after 6 months was 29,3 kg, 14,5%TBWL, 28,5%EWL (11 patients), after 1 year of 41,1 kg, 21,4%TBWL, 33,9%EWL (8 patients), 1,5 year 44,3 kg, 23,3%TBWL, 36,1 %EWL (6 patients) and in 2 years 45 kg, 25,5%TBWL, 38,8 %EWL in 2 patients. No serious adverse events occurred. Three minor adverse events were reported: all minor infections at the wound site, resolved by local ATB. Procedural success was 100%.

Conclusion: The results from this study demonstrate that the AspireAssist is technically feasible, safe with a low complication rate, and effective in the super-obese, either as a long-term therapy or a bridge therapy to bariatric surgery.

O.703 PREOPERATIVE NUTRITIONAL COUNSELING OF BARIATRIC CANDIDATES IN A PUBLIC HOSPITAL IN BRASÍLIA, BRAZIL

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Background: Successful outcomes after bariatric surgery are influenced by an adequate nutritional approach in the preoperative period to ensure weight loss and change in lifestyle and dietary pattern. This study aims to evaluate a preoperative nutritional counseling model from a bariatric service in a public hospital in Brazil.

Methods: A quasi-experimental study with candidates for bariatric surgery in a public hospital in Brasília, Brazil. Data were collected twice: in the first nutritional appointment and in the moment that patient reached the proposed weight established by the nutrition team. We also evaluated the adherence to treatment.

Results: We studied 27 patients with 44.5±7.7 years and BMI of 40.6±5.5. Twenty four patients were female and 51.8% had both fasting glucose and triglycerides above normality values. Glycated hemoglobin was above normal levels in 44%. Chewing time changed from 12±4.4 to 29±7.0 minutes per meal (p=0.0001). Initially, 5 was practicing physical activities what increased to 20 (p=0.0001). Constipation was reported by 15 patients before treatment and persisted in only 1 patient (p=0.03). Energy consumption varied from 1612.3±309.8 to 1468,8±328.9kcal (p = 0.003) and in a 9.1±10.7 months of follow up, the weight loss was 7.4±4.2kg. Twenty one patients had weight loss greater than that proposed and sample showed a regular adherence (mean 13.7±3.64 points, considering the maximum of 30).

Conclusions: Preoperative monitoring was able to promote changes in physical activity behavior, chewing time, gut function and energy consumption in this population.

O.705 LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH – STATUS OF A MALABSORPTIVE PROCEDURE IN A STEPWISE APPROACH

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Background: Biliopancreatic diversion with duodenal switch (BPDDS) is one of the most effective procedures but associated with significant morbidity and mortality. The aim of this study was to evaluate BPDDS.

Methods: 554 bariatric procedures performed from 01/2010 to 12/2014 were collected in a database. All BPDDS performed as secondary procedures were included in this study. BMI, height and weight, associated diseases, perioperative course, complications and follow-up were analysed.

Results: 27 BPDDS were performed as secondary procedures. This corresponds to only 4,8% of all 554 bariatric procedures. 21 operations were performed in a planned stepwise approach, 6 in an unplanned escalating approach. Initial median BMI was 56,0 ± 13,0 kg/m² and 41 ± 6,5 kg/m² at the secondary operation. The median interval between the sleeve gastrectomy and BPDDS was 24,0 ± 12,3 months. Operation time was 174 ± 41 minutes. In 25 out of 27 cases postoperative course was uneventful. One revisional operation was necessary because of hematoma near the duodenoileostomy, in one case multiple revisions were performed due to wound infection. There was no mortality. In 19 patients follow-up period of 12 months was exceeded, median follow-up was 24,0 ± 14,0 months. Median BMI was 30,1 ± 5,6 kg/m² (- 27 kg/m²). Weight loss was median 83 ± 57kg.

Conclusions: In a stepwise approach BPDDS is safe and highly effective, particularly in super- and super-super-obese patients. Increasing number of sleevegastroectomy and the good clinical outcome of BPDDS will most likely lead to an increased number of this procedure.

O.709

COMPLICATIONS AFTER > 2000 SLEEVE GASTRECTOMY – SINGLE SURGEON’S EXPERIENCE

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Background: Laparoscopic Sleeve Gastroectomy (LSG) is becoming a very common bariatric procedure, based on several advantages it carries over more complex bariatric procedures. LSG is generally considered a straightforward procedure, but the technical factors may be one of the major determinants of complications.

Methods: A retrospective analysis of a single surgeon’s experience was conducted of a prospective cohort of LSG between September 2005 and December 2014. The first 1200 cases of LSG were performed without reinforcement of the staple line and the last 800 cases with GORE® SEAMGUARD® Staple Line Reinforcement. Data were collected on all diagnostic and therapeutic measures necessary to manage different complications, days of hospitalization and intensive care unit (ICU) stay.

Results: Two thousands twelve patients underwent a LSG. Twenty cases (1 %) of gastric leak were recorded. Of these, 17 patients were women (94.4%) with a mean age of 39.4 years (range 22-61) and mean BMI of 41.2 kg/m² (range 34.8-57.1). In group A (the first 1000 cases) there were recorded 18 cases of gastric leak and in group B (the last 1000 cases – 800 cases with GORE® SEAMGUARD® Bioabsorbable Staple Line Reinforcement) 2 cases of gastric leak. In 456 cases (22.7%) it was performed a revisional LSG – 395 patients after gastric banding and 61 patients underwent resleeve gastroectomy. The hemorrhage was recorded in 22 cases (1.09%). The other complications were represented by: 7 cases of stenosis, 3 cases of portal thrombosis, one case of pancreatitis. Two cases of mortality were recorded.

Conclusions: The LSG can be performed safely with a low complication rate. This review of a large series of a single surgeon’s experience demonstrated that the complication rate after LSG could be significantly reduced by surgeon’s experience.

O.712

COST ANALYSIS OF LEAK AFTER SLEEVE GASTRECTOMY

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Background: Leaks after laparoscopic sleeve gastroectomy (LSG) are estimated to be the most serious complication of this procedure due to difficult healing process. The objective of the present study was to evaluate the costs of leaks after LSG.

Methods: A retrospective analysis was conducted of a prospective cohort of LSG between September 2005 and December 2014. The first 1200 cases of LSG were performed without reinforcement of the staple line and the last 800 cases with GORE® SEAMGUARD® Staple Line Reinforcement. Data were collected on all diagnostic and therapeutic measures necessary to manage leaks, days of hospitalization and intensive care unit (ICU). Additional outpatient care was also analyzed.

Results: Two thousands twelve patients underwent a LSG. Twenty cases (1 %) of gastric leak were recorded. Of these, 17 patients were women (94.4%) with a mean age of 39.4 years (range 22-61) and mean BMI of 41.2 kg/m² (range 34.8-57.1). In group A (the first 1000 cases) there were recorded 18 cases of gastric leak and in group B (the last 1000 cases – 800 cases with GORE® SEAMGUARD® Bioabsorbable Staple Line Reinforcement) 2 cases of gastric leak. 15 patients have had available data for cost analysis. Mean intrahospital cost was 34398 € (range 7543 – 91632 €). Prolonged hospitalization in ICU accounted for the majority of hospital costs (57.3 %). Mean additional outpatient costs for leaks were 41284 € (range 14148–75,684€).

Conclusions: Costs might even differ between health systems due to different policies and due to individual agreements with insurance companies. These data only indicate the direct health-care costs. Other costs such as rehabilitation, unemployment or relatives additional costs are difficult to evaluate and were not taken into account. The total high costs are an additional argument to reduce complication rate. These data should be considered when analyzing the cost effectiveness of staple line reinforcement.

O.715

NO FIXATION DURING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) INDUCES MORE COMPLICATIONS : ONE-YEAR RESULTS OF A PROSPECTIVE, RANDOMIZED, MULTICENTRE TRIAL (ANOSEAN)

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Background: Gastro-gastric fixation (GGF) during laparoscopic adjustable gastric banding (LAGB) is challenged since results of large retrospective studies showed no increase of slippage rate and easier band removal in case of conversion to another procedure when the band has not been coated. However, nowadays data are still inadequate to conclude that GGF should be abandoned. The aim of the study was to show the non-inferiority of no GGF. The main criterion was the comparison of the reoperation rate at 1 and 3 years.

Methods: ANOSEAN study is a controlled prospective randomized single-blind trial (CPP 2009-A00346-51). Seventeen bariatric center included a total of 706 patients (calculated with power=.8, alpha=.05 and reoperation rate: 24%, delta: 8%). Patients in group1 received gastric banding with GGF.

Results: Follow-up at 1 year was 89.8%. At baseline, patients were similar regarding sex, age and BMI. GGF increased operative time (39±25 mn versus 43±28 mn ; p<0.001). One early slippage (Day2) occurred in group2. At 1 year, reoperation rate in group1 was 1.5% versus 4.3% in group2 (p=0.039). Considering only reoperation for slippage, band removal or repositioning rate was higher in the non-fixation group at 1 year (2,9 % versus 0%, p=0.002). In multivariate analysis, non-fixation was an independent risk factor of reoperation and slippage (OR:3.2 (95% CI: 1.2–9.1), p<0,001).

Conclusions: Preliminary results at 1 year showed that GGF prevent band slippage and reoperation. Benefits of no fixation have to be assessed during band removal and redo surgery to conclude definitely whether surgeon should continue to do GGF.

O.718 BENEFITS OF COAGULABLE HUMAN PROTEIN CONCENTRATE IN THE PRESENCE OF BLEEDING DURING BARIATRIC SURGERY.

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Introduction: Laparoscopic Bariatric Surgery is considered the most feasible option in the alternative treatment for patients with obesity, offering weight loss and improvement of comorbidities. However is considered a surgery with high risk of complications, so is important to perform the surgical procedure under the best conditions reducing risks and increasing the benefits to improve patient health. The complication rate during the event is 0.6 to 3.7% of cases (results worldwide), and bleeding is one of the most frequent causes, increasing the risk of fistulas, and also postoperative morbidity and mortality. For this reason, more tools are searched for successful in this kind of surgery. We present the benefits achieved in the implementation of coagulable human protein concentrate (CHPC) in the presence of bleeding during laparoscopic bariatric surgery at Surgical Clinic for Obesity and Metabolic Diseases at General Hospital Dr. Rubén Leñero, dependent of Health System at Mexico City.

Methods and Procedures: Descriptive and Longitudinal.

Results: 50 patients were operated. The surgical procedures were: Gastric bypass and gastric sleeve. There were 25 patients in whom the CPHC, was applied; and 25 patients as control group, observing adequate cost-benefit.

Study period: January – December 2014.

Conclusions: The use of CPHC in bariatric surgery during transoperative bleeding reduces the risk of complications and the patient's hospital stay.

O.721 INTRAVENOUS ACETAMINOPHEN: AN OPTIMAL OVERNIGHT ANESTHETIC FOR BARIATRIC SURGICAL PROCEDURES DECREASING PAIN, OPIOID CONSUMPTION, AND REDUCING COMPLICATIONS POST OPERATIVELY

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Background: Over the past decade, multimodal analgesia has gained a foothold for being an effective strategy in managing postoperative pain. Utilization of different classes of analgesics optimizes analgesic efficacy using lower doses of each of the respective agents, thus limiting the risk for dose-related adverse effects, such as nausea and vomiting. Yet, unlike many other abdominal surgeries, bariatric metabolic procedures (Gastric Sleeve, Gastric Bypass) have an exponentially increased risk for leakage when subject to secondary dose-related adverse effects (vomiting). Moreover, short term management such as oral intake of analgesia, increases risk of erosion to the newly formed staple line. The following study outlines pain management control post operatively with respect to patients under general anesthesia treated with Acetaminophen IV postoperatively and Acetaminophen with Codeine Oral Elixir for short term management.

Methods: We present the case of four-hundred-fifty-one (n=451) bariatric patients (Male=213, Female= 238) with ages ranging from 15-70 years of age who received gastric sleeve or gastric bypass procedures with varying pain management. Two-hundred-twenty-three

(n=223) patients were treated with opioids postoperatively while two-hundred-twenty-eight (n= 228) were treated with acetaminophen IV (1gm) every six hours for 24hrs and discharged on acetaminophen with codeine elixir as needed. Patients were assessed for pain, complications, and analgesia associated adverse effects every 6 hours for 24 hours postoperatively, and one week postoperatively.

Results

	Acetaminophen IV/Elixir	Opioids/Pills
24 hr Post Operative Pain (1=Low Pain, 5=moderate pain 10=High Pain)	Average = 3.2/10 Range (0-4)	Average 6.3/10 Range (0-10)
Nausea	11.4%	29.8%
Vomiting	5.26%	12.7%
1 week Post Operative Pain (1=Low Pain, 5=moderate pain 10=High Pain)	Average = 0.2/10 Range (0-2)	Average = 0.9/10 Range = (0-5)
Complications (Leakage)	0%	0.5%
In patient stay (Hrs)	Average = 23.1 hr	Average = 29.3 hrs
Request for Opioid/Stronger Medication or Dose	0.9%	14.3%

Conclusions: Acetaminophen IV paired with Acetaminophen Codeine Elixir, is an optimal pain management analgesic with marked improved pain recovery and reduced inpatient stay, while lowering the risk of complications for bariatric surgery postoperatively.

O.722 A SPECIALISED MANAGEMENT OF BARIATRIC SURGERY COMPLICATIONS MINIMISE MORTALITY AND MEDICAL COSTS.

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Introduction: Complications of bariatric surgery may be life-threatening. We developed a specialised assistance network allowing immediate transfer of each patient suffering of bariatric surgery complications in our expert center. The aim of this study was to describe this population and to evaluate the medico-economic impact of this network.

Methods: This unicentric retrospective study included all the patients transferred in our center for a complication of bariatric surgery, from 01/01/2013 to 05/31/2014. All clinical, biologic and morphologic data were collected. Economic information of all hospital stays were collected with the PMSI system.

Results: 49 patients were included. Initial procedure was a Sleeve Gastrectomy in 55% of cases, a Gastric Bypass for 37% and adjustable gastric banding for 8%. 57% patients underwent surgical reintervention. 12% also needed an endoscopic or interventional radiological procedure. One third of patients never needed surgery. At 1 month, 71% patients were discharged but 69% still had enteral nutrition at home. Only 27% were alimented normally. After 6 month, 51% patients were cured. The length of the first stay was 16 days [1-184] for a valorisation of 10980 € [512-187665] per patient. The number of stays was 3 for a global cost of 1409 euros [390-187665]. No death was reported.

Conclusion: Bariatric surgery complications remain difficult to prevent. A specialised management of these complications may lead to less mortality, and minimise economic impact. It seems necessary to introduce a convention between an expert obesity center and other obesity surgeons facilitating the transfer of complicated patients. .

O.726 GASTRIC BYPASS SURGERY IN THE ELDERLY: IS IT SAFE AND EFFECTIVE?

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Background: The prevalence of obesity is increasing in the elderly population. The Roux-en-Y gastric bypass (RYGBP) is considered the gold standard in treating morbid obese patients but many surgeons are reluctant to perform this form of treatment in the elderly population because of fear for complications. The aim of this paper is to determine if RYGBP is a safe and effective treatment for obesity in adults over the age of 65 years.

Methods: Between 2008 and 2014, 43 patients over the age of 65 underwent LRYGB in our centre. We analyzed the outcome of gastric bypass in this particular group in a retrospective study. Characteristics included in this study were gender, pre-operative age and BMI, comorbidities, length of stay (LOS), postoperative BMI, percentage of excess weight loss (%EWL) and postoperative complications.

Results: Eighteen male and twenty-five female patients with a mean age of 66.8 years and BMI of 42.2 kg/m² were operated. Comorbidity rate was high with 51.2% diabetes, 83.7% hypertension and 23.3% sleep apnea. Mean length of stay was 3.6 days. One year after surgery there was a significant weight loss with a BMI and %EWL of 31.2 kg/m² and 74.1%. At 2 years the BMI and %EWL

were 31.1 kg/m² and 67.6%. Postoperative complication rate was 18.6% with no mortality. A significant improvement of type II diabetes was seen in all patients. There was also a subjective improvement in functional mobility noted.

Conclusions: Our study confirms weight loss efficacy of gastric bypass in the elderly population. RYGBP can be safely performed in older adults with low rate of surgical complications and a very low mortality rate. Long-term trials are needed to better evaluate the benefit of bariatric surgery in aging obese patients.

O.727 ONGOING WEIGHT LOSS AND MALABSORPTION AFTER ROUX-EN-Y GASTRIC BYPASS DUE TO A VANEK'S TUMOR

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Background: Roux-en-Y gastric bypass (RYGB) combines restriction and micronutrient malabsorption. Vitamin B12, vitamin D, iron, calcium and proteins are the most common deficiencies.

A few cases in literature describe generalized edema or kwashiorkor after RYGB due to protein malabsorption, but in all cases the symptoms resolved after adequate therapy. We describe a rare cause of therapy resistant hypoproteinemia.

Results: A 56-year old woman presents with anasarca since a few months, due to unexplained therapy resistant hypoproteinemia. It was suspected to be due to previous RYGB. Since patient refused reversal of the bypass procedure, a surgical intervention in order to lengthen the common limb was planned. However, intraoperatively an enteric fistula from the small bowel 30cm distal of the distal anastomosis to the preterminal ileum was observed. The fistula seemed to arise from the base of a diverticulum or pseudodiverticular structure at the preterminal ileum, thought to be a Meckel's diverticulum. Partial resection of the small intestine with the diverticular structure was performed and the fistula was closed. The immuno-histopathological diagnosis however revealed a Vanek's tumor.

Conclusions: Vanek's tumor or inflammatory fibroid polyp is a rare benign lesion, mostly located in the stomach or small intestine. The symptoms depends on the location and size of the tumor, however they are often asymptomatic. Several cases in literature describe intussusception due to Vanek's tumor in the small intestine, but there are no previous publications in which a Vanek's tumor appears to be responsible for the formation of a bowel fistula.

O.730 LONG TERM RESULTS OF DUODENAL SWITCH WITH RIGHT GASTRIC ARTERY LIGATION

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Background: Laparoscopic Duodenal Switch (LDS) is not a common bariatric procedure worldwide, but it has one of the best weight loss results. We added the right gastric artery (RGA) ligation in order to achieve a tension-free duodeno-ileal anastomosis. Here we present our long-term results from our experience.

Methods: Descriptive study from our prospective database with one and two stage patients included. Patients with age over 50 years old or BMI over 50kg/m² were selected. We analyze weight loss, comorbidities resolution, morbidity and mortality.

Results: 201 patients were analyzed. 148 women (73.63%) with mean age of 46 years old (range 22-61) and mean BMI 46.92kg/m² (34-64). 26 cases were staged. Median of hospital stay was 4 days. Median follow-up was 48 months. Weight loss at 12, 24, 36, 48 and 60 months was 73.64%, 73.28%, 72.08%, 75.63%, and 73.89% Excess BMI loss respectively. Morbidity was found in 43 patients (20.5%) but most of them was minor (65% Clavien≤II). There were just 2 cases of duodeno-ileal leak, RGA ligation made this anastomosis easier and tension free in all cases. One patient died 14 months after surgery due to complications. All patients with Type 2 DM normalized their biochemistry and were allowed to give up their medications. There were not significant biochemical nor metabolic disorders during the follow-up.

Conclusions: LDS is a complex bariatric procedure with good LDS results in weight loss and comorbidity resolution. We found low morbidity and mortality in our series. RGA ligation was a good technical gesture to achieve these results.

O.731 EFFECT OF AN EVIDENCE-BASED STANDARDIZED APPROACH ON THE OUTCOME OF 433 CONSECUTIVE SLEEVE GASTRECTOMIES: A COUNTRYSIDE HOSPITAL EXPERIENCE

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Background: Laparoscopic Sleeve Gastrectomy (LSG) has been recognized as an effective primary bariatric procedure. The adoption of a standardized technique, taking into account the results of the international experience, could improve procedure safety and effectiveness. We reported a single-center 433-patient series of LSG standardized according to our technique. Complications, body mass index (BMI) loss and co-morbidity resolution were evaluated.

Methods: From January 2010 to October 2014, 433 consecutive patients (M:86/F:347) underwent LSG (mean age 40.8±10.6 years, mean BMI: 43.4±4.9 kg/m², 30 redo surgery (6.7%)). LSG were performed using an Echelon Flex Endopath 60mm Stapler alongside a 42 Fr calibrating bougie. A synthetic buttressing material (GORE® SEAMGUARD®) was used to reinforce the staple line.

Results: Mean operative time was 77.1±29.9 min. There were no intraoperative complications and perioperative mortality rate was zero. Staple-line leak occurred in one case (0.2%) and 2 patients (0.4%) had postoperative bleeding that required reoperation. The mean percentage of excess BMI loss was 60.8±18.5 at 6 months postoperatively, 83.8±18.7 at 12 months, 88.3±19.3 at 24 months, 85.8±20 at 36 months and 77.3±19.5 at 48 months. Type 2 diabetes resolved in 75.9% of patients.

Conclusions: LSG resulted in substantial weight loss and co-morbidity resolution at mid-term follow-up. The standardization of this procedure according to the best available literature evidence allowed us to have a leakage and hemorrhage rate lower than in most similar published series.

O.733

FEASIBILITY OF ENHANCED RECOVERY AFTER BARIATRIC SURGERY

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Background: The Enhanced Recovery After Bariatric Surgery (ERABS) optimise perioperative surgical care by coordinated evidence-based interventions for improved patient recovery. While such program already exists for colorectal surgery, currently no standardized ERABS pathways exist for bariatric surgery in the National Health Service. We studied its feasibility in our bariatric surgery unit, at our hospital in London, UK.

Methods: Our ERABS pathway is a team effort that includes modified anaesthesia and ventilatory techniques, avoidance of long-acting opioids, aggressive peri-operative physiotherapy, customised peri-operative fluid and dietary management, etc. Data on patients operated in our hospital was collected on patients from Oct'2010 to Oct'2012, with follow-up for at least 2 years with subsequent retrospective analysis.

Results: A total number of 233 patients were collected, of which 224 were available for analysis. Patients' demographics are: 19 - 70 years, F (77%), M (23%), BMI 35.2 - 84.2.

The post-op stay varied between 0-37 days, with 31 patients (13.8%) discharged by day 1, 113 patients (50.5%) on day 2, and the majority (>90%) discharged home by day 3.

Out of 224 patients, 55 (24.5%) patients returned. 8 (3.5%) were readmitted within the first 30 days post-op and 18 (8%) patients within 3 months. All patients with a history of smoking were readmitted. The re-operation rate was 6.25% (14 patients). The total elective or emergency revisits within 2 years by the patients were 84 (37.5%).

Conclusions: The study showed feasibility of ERABS in our Bariatric unit for improving patient recovery. However, there is much scope for improvement.

O.735

ANTRAL RESECTING VS ANTRAL PRESERVING SLEEVE GASTRECTOMY: EARLY RESULTS IN A UK REGIONAL BARIATRIC CENTRE.

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Background: Laparoscopic Sleeve Gastrectomy (LSG) is rapidly gaining popularity, however, there are certain technical aspects such as the optimum size of the retained pyloric antrum that have not been fully standardized. Our aim was to compare the antral resection versus antral preservation techniques in terms of weight loss.

Methods: We prospectively collected data from November 2011 until February 2014 for 111 patients that underwent LSG. Patients were allocated from a pooled list to individual surgeons' preference for antral resection or antral preservation. At 6 months interval, absolute weight loss (AWL), excessive weight loss percentage (EWL%), decrease in BMI (body mass index), morbidity and mortality were measured.

Results: In the AP group (n=56) mean AWL amounted to 28.4 Kg at 6 months, and there was no significant difference for the AR group (n=55) where AWL amounted to 27.9 Kg, (p=0.48). Two patients of the AR group presented with postoperative complications (3%) compared to 5 for the AP group (8.9%). The most common postoperative symptom was new onset reflux, with equal incidence in both groups (9%).

Conclusions: Both variations of LSG are quite effective in weight loss at six months, with no significant difference between groups. However, further study with long term follow-up is required to fully compare the two techniques.

O.743

DUODENO-JEJUNAL BYPASS LINER IN COMPLEX DIABETIC PATIENTS

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Background: The duodeno-jejunal bypass liner (DJBL) is a new endoscopic device with promising results in dealing with diabetic obese patients. We evaluated the device in complex diabetic obese patients.

Methods: We indicated the DJBL on patients with very long T2DM evolution or poor glycemic control. We excluded patients with BMI over 45kg/m². The device was scheduled for 12 months. We evaluated the evolution of T2DM during the use of the DJBL and after the retrieval.

Results: 27 patients were indicated for DJBL. 21 had the device retrieved during the study time (13 had at least 6 months of follow-up after that). 14 were women with mean age of 53.8 (range 29 to 41). They had an average of 165 months of T2DM duration (5 to 348) and HbA1c was 8.79% (5.4 to 27.5). 89% of the patient needed insulin. HbA1c improved in 1.22 units at the time of the retrieval with moderate worsening after that. Following ADA criteria, 1 patient had complete remission, 1 partial, and 3 improvement at the time of the retrieval. 6 months later just 3 patients improved. There were not severe complications and no mortality.

Conclusions: In those complex T2DM patients the effect of the DJBL is not as good as in other better profile patients. We found one subtype of patients with moderate results, but the population is too low to take any heavy conclusion.

O.744

BODY COMPOSITION CHANGE AFTER ROUX-EN-Y GASTRIC BYPASS VS SLEEVE GASTRECTOMY IN A RANDOMIZED CONTROLLED TRIAL

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Background: Roux-en-Y gastric bypass (RYGB) produces moderate malabsorption compared to purely restrictive sleeve gastrectomy. It is considered insignificant but may lead to different changes in body composition. The aim was to assess changes in body composition after RYGB vs SG in a randomized controlled study.

Methods: Seventy two patients were enrolled for the randomized controlled study, 36 patients underwent RYGB and 36 SG. Follow up was 12 months. The bioelectrical impedance analysis (BIA) was performed in all the participants and results from preoperative period, 1, 6 and 12 months were analysed.

Results: Both RYGB and SG led to significant weight loss with no differences between procedures. Fat mass (FM) decreased from 59.5±13kg before surgery to 30±13kg at 12 months in RYGB group vs 56±12kg and 31±12kg in SG group. Fat-free mass (FFM) decreased from 73±15kg to 63.5±16kg vs 66±11kg to 60±9kg in RYGB and SG groups respectively. The decrease was significant but there were no differences between groups. There were also no differences between groups in proportional decrease in both FM and FFM during follow-up.

Conclusions: The different weight loss mechanisms in RYGB vs SG do not result in increased risk of FFM loss after surgery. FFM loss is significant after both procedures but do not exceed FM loss.

O.751

LAPAROSCOPIC GASTROILEAL BYPASS FOR THE TREATMENT OF MORBID OBESITY. TECHNICAL ASPECTS AND NEW CONCEPTS.

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Background: Currently, biliopancreatic diversion is perceived as the most effective operation for long-term treatment of massive obesity. In 2004 we began conducting two-stage biliopancreatic diversion to treat high-risk patients, particularly those with respiratory and cardiac diseases, who required quick surgery. The first half of the biliopancreatic diversion is what we have named the gastroileal bypass, a gastric bypass with a horizontal section of the stomach and one anastomosis with the bowel, measured from the cecum. We were surprised to observe that the results in weight loss and resolutions of comorbidities were excellent, none of the patients needed the second stage of the biliopancreatic diversion. For these reasons, in 2010 we expanded the indications.

Methods: Between April 2010 and December 2014, 1000 patients underwent gastroileal bypass (GIB) at our institution by the same surgeon. They consist of 622 women and 378 men. The average age was 43,39 years of age. The pre-operative average weight was 119,8 Kg and the pre-operative average BMI was 43 Kg/m².

Results: Patients who have undergone gastroileal bypasses with more than 24 months of follow-up: 34,89% lost more than 100% of their excess weight, 42,29% lost between 75 and 100% of their excess weight. 95% of patients dropped to a BMI <35, 77% to a BMI <30 and 35% to a BMI <25.

Conclusions: Our technique, the Gastroileal bypass, is faster and safer than the biliopancreatic diversion with better recovery for patients and provides less steatorrhea and better absorption of fat-soluble vitamins.

O.753**PREOPERATIVE NUTRITIONAL COUNSELING OF BARIATRIC CANDIDATES IN A PUBLIC HOSPITAL IN BRASÍLIA, BRAZIL****Amália Bastos¹**, Mariana Melendez-Araújo^{1, 2}, Rosikely Pinheiro¹, Sérgio Arruda^{1, 2}*Hospital Regional da Asa Norte-HRAN, Brasília, Brazil*□ *Clinic Dr. Sérgio Arruda, Brasília, Brazil*

Background: Successful outcomes after bariatric surgery are influenced by an adequate nutritional approach in the preoperative period to ensure weight loss and change in lifestyle and dietary pattern. This study aims to evaluate a preoperative nutritional counseling model from a bariatric service in a public hospital in Brazil.

Methods: A quasi-experimental study with candidates for bariatric surgery in a public hospital in Brasília, Brazil. Data were collected twice: in the first nutritional appointment and in the moment that patient reached the proposed weight established by the nutrition team. We also evaluated the adherence to treatment.

Results: We studied 27 patients with 44.5 ± 7.7 years and BMI of 40.6 ± 5.5 . Twenty four patients were female and 51.8% had both fasting glucose and triglycerides above normality values. Glycated hemoglobin was above normal levels in 44%. Chewing time changed from 12 ± 4.4 to 29 ± 7.0 minutes per meal ($p = 0.0001$). Initially, 5 was practicing physical activities what increased to 20 ($p = 0.0001$). Constipation was reported by 15 patients before treatment and persisted in only 1 patient ($p = 0.03$). Energy consumption varied from 1612.3 ± 309.8 to 1468.8 ± 328.9 kcal ($p = 0.003$) and in a 9.1 ± 10.7 months of follow up, the weight loss was 7.4 ± 4.2 kg. Twenty one patients had weight loss greater than that proposed and sample showed a regular adherence (mean 13.7 ± 3.64 points, considering the maximum of 30).

Conclusions: Preoperative monitoring was able to promote changes in physical activity behavior, chewing time, gut function and energy consumption in this population.

O.758**PATIENT PERSPECTIVES ABOUT CARE AND OUTCOMES FOLLOWING SLEEVE GASTRECTOMY****Melanie Lauti¹**, Samantha Stevenson¹, Andrew D MacCormick^{1,2}¹*University of Auckland, Auckland, New Zealand*²*Middlemore Hospital, Counties Manukau District Health Board, Auckland, New Zealand*

Background: Sleeve gastrectomy is one of the most commonly performed bariatric procedures. As longer-term outcome data becomes available, so has the issue of weight regain. At Counties Manukau District Health Board, patients are discharged from the bariatric service at 18 months. This coincides with the onset of weight regain. Furthermore, a significant proportion of our patients expressed a desire for longer follow-up care when we contacted them to assess their five-year outcomes. The purpose of this study was to understand patient perspectives about their care and outcomes following sleeve gastrectomy.

Methods: Patients at least two years post sleeve gastrectomy who had evidence of weight regain were invited to participate in a focus group. All discussions were audiotaped and transcribed. Content analysis was performed independently by two researchers and the results integrated.

Results: Seven focus groups were conducted with 38 participants. The majority of participants were female (68%) and European (63%). Maori (21%) and Pacific peoples (11%) were also represented. The majority of participants were satisfied with the result of their surgery (79%) and would recommend it to others (82%) but only 53% were satisfied with their follow-up care. Themes identified included the desire for longer-term support and better access to information.

Conclusions: While most patients are satisfied with the result from sleeve gastrectomy and would recommend it to others, only half of patients feel that follow-up care is adequate. The information from these focus group discussions will be integral in developing optimised long-term follow-up care for these patients.

O.764**SAFETY AND EFFICACY OF LAPAROSCOPIC SLEEVE GASTRECTOMY AS REVISIONAL SURGERY FOR FAILED GASTRIC BAND: TWO-STAGE APPROACH.****Ali Almontashery¹**, Ashraf Maghrabi¹, Asim Maghrabi¹, Mohammad Othman¹, Raad Fayez¹¹*Bariatric surgery section, Department of surgery, King Abdullah Medical City, Makkah, Saudi Arabia*

Introduction: With the ever-increasing number of gastric band failures and the need to explant and revise them, coupled with the known higher incidence of complications associated with revisional procedures. A proper approach aiming to decrease the perioperative morbidity and producing a good long-term result is needed.

The Laparoscopic Sleeve Gastrectomy (LSG) has shown to be a good revisional procedure after gastric band failure, in this study were assessing the safety and efficacy of performing LSG as a staged procedure after gastric band failure.

Methods: 15 Morbidly obese patients received a staged LSG at our center between 2012 and 2014. Completion of the LSG was done once a minimum period of time has elapsed after explanting the gastric band.

Using our patient data base a retrospective analysis of the data was done, Demographics, operative time, perioperative complications, length of stay, time between the two stages, and the % EWL at 3, 6, 12 months was analyzed.

Results: The mean BMI was 55 (38-76), operative time was 95 min (85-145), and the time between the two stages was 133 days (96-185). No leaks, bleeding, DVT/PE were observed, the EWL % at 1 year 76%.

Conclusion: In our small cohort of patients performing a staged LSG after gastric band failure have produced similar overall weight loss to the single stage approach, however when a two stage approach is used a decrease in the perioperative outcome is noticed compared to the usually done one stage approach. Given the small number of our group more cases and longer follow-up is warranted for firm conclusion.

O.767

SLEEVED GASTRIC BYPASS AND CRUROPLASTY BY SINGLE INCISION TRANSUBILICAL SURGERY

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Background: Single incision laparoscopic surgery is an alternative for morbid obese patients with some advantages, mainly the cosmetic benefit. In the other side costs are usually considered higher. Single Incision Transumbilical Surgery (SITU) is low cost modality described by Huang C.K. in Taiwan, reducing such an inconvenient.

Methods: We have applied this technique to 15 patients with good functional and cosmetic results.

Results: In this video we demonstrate the technique and how it may be a convenient option even in bariatric surgery, in this case “sleeved gastric bypass” and “hiatal hernia treatment”.

Conclusions: We conclude this approach is an useful method at least in case of young women where cosmetic benefit may valuable for the psychology and personal privacy.

O.770

ROBOTIC REVISIONAL GASTRIC BYPASS: POUCH “REDO” AND HIATAL HERNIA REPAIR

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Case report: A 35 year old male patient was submitted to a Lap-band procedure in 2009 (BMI 48 Kg/m²) and a laparoscopic revision to gastric bypass in 2013 (BMI 46 Kg/m², 152 Kg). After 1 year (BMI 33 Kg/m², 112 Kg) of the second procedure, he has presented with symptoms of reflux, regurgitation and dysphagia (for meat and fibrous food). An upper endoscopy has shown low grade esophagitis, a small amount of retained food in the pouch (after 8 hour fasting) and a gastrojejunostomy of 1,5 to 2,0 cm. An upper GI with barium has shown a herniated pouch and a gastric pseudo-diverticulum (retained fundus with the pouch). A second revisional procedure was performed robotically (*Da Vinci SI*) and is shown in his video. The pouch and distal esophagus was dissected, the hernia repaired and the excess fundus was resected. Endoscopic control was performed before the fundus resection and at the end of the procedure. Total surgical time was 115 min. No minor or major complications were observed. Symptoms improved immediately after the procedure.

O.773

BENEFITS OF METABOLIC SURGERY IN PATIENTS WITH BMI BETWEEN 30 AND 35 KG/M²

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Background: Bariatric surgery may be among the most effective treatment for metabolic diseases. According to the Brazilian Bariatric Consensus, patients with a body mass index (BMI) between 30 and 35 kg/m² with severe comorbidities and clinically untreatable obesity have indication to do metabolic surgery. The aim of this study is to analyze the benefits of metabolic surgery, in terms of amelioration of comorbidities, in patients with BMI between 30 and 35 kg/m².

Methods: Were analyzed the medical records of all patients of Clínica Dr Sérgio Arruda, a private clinic in Brasilia (Brazil), who underwent metabolic surgery between 2007 and 2013. Were included patients with BMI between 30 and 35 kg/m² and a serious comorbidity.

Results: Were included on this research 68 patients, of which 66% of patients had hypertension, 57% had obstructive sleep apnea, 40% were diabetic and 57% had dyslipidemia. The mean pre-operative values were: total cholesterol = 192.7 (±39.9), triglycerides = 152 (±60), VLDL = 30.7 (±13.8), LDL = 107 (±46.7), HDL = 47.8 (±10.8), glycemia = 98.25 (±33.4). After surgery, the mean weight loss was of 21% and there was a reduction of 14% in the levels of total cholesterol, 33% in triglycerides, 31% in VLDL, 11% in LDL, 6% in glycemia and an increase of 5% in HDL.

Conclusions: Patients with profound metabolic disturbance may benefit from bariatric surgery, although having a BMI between 30 and 35 kg/m². Thus, the major indication for bariatric surgery should be reoriented from BMI to metabolic disease.

O.777

8 YEARS RESULTS OF LAPAROSCOPIC MINI GASTRIC BYPASS IN 1468 MORBIDLY OBESE PATIENTS

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Background: Mini Gastric Bypass (MGB) is becoming a popular bariatric procedure owing to its safety, efficacy and reversibility.

Methods: A retrospective review of prospectively collected data of 1468 patients (975 women, 493 men) who underwent MGB from Feb 2007 to Feb 2014 was done.

Results: Preoperative : Mean weight 121 ± 11.5 kg , BMI 43.2 kg/sq.m , Mean age 38.5 ± 8.1 years. Operating-time 48 ± 11.5 minutes & hospital stay 1.9 ± 1.1 days. Mean excess weight loss 88%. 90%, 84%, 83%, 82%, 78%, 76%, 74% at years 1 to 8 respectively with a significant improvement in obesity-related comorbidities . Diabetes remission 95 % at 1 year and 87 % at 8 years. Bile reflux was 1.2 %. There were 2 leaks (0.1%) , 15 (1%) patients had low albumin .MGB was reversed in 11 (0.7%) .Marginal ulcers were noted in 12 patients (0.8 %) during follow-up for symptomatic dyspepsia. Anemia was the most frequent late complication occurring in 88 patients (5.9%).

Conclusion: MGB is a simple, safe, effective and reversible procedure having results equivalent to other bariatric procedures with minimal complications.

O.779

LONG TERM RESULTS OF MINI GASTRIC BYPASS IN LOW BMI (30-35 KG/SQ.M) WITH TYPE 2 DIABETES.

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Background: Mini Gastric Bypass is emerging as an effective & reversible metabolic procedure with added safety and simplicity.

Methods: From Feb 2007 to Feb 2014, a total of 1468 patients underwent MGB.983 (67%) patients had Type 2 Diabetes Mellitus (T2DM).Out of these 128 patients (82 females and 46 males) had BMI between 30-35 kg/sq.m.The mean age was 41.6 ± 10.2 years. Retrospective analysis of the prospectively collected data was done. HbA1C $< 6.0\%$ without medication-defined remission of T2DM.

Results: Preoperative : BMI 33.4 ± 3.3 kg/sq.m , waist circumference 104.5 ± 8.2 cm, C-peptide 3.4 ± 1.2 ng/ml and duration of T2DM 6.5 ± 3.1 years. Complete remission was achieved in 64 % at 1 year, 66 % at 2 years and 52 % at 8 years. The mean HbA1c decreased from $10.7 \pm 1.5\%$ to $6.2 \pm 0.5\%$ in 1 year, $5.4 \pm 1.2\%$ in 3 years and $5.9 \pm 1.5\%$ in 8 years. A pre-operative duration of T2DM greater than 10 years was shown to significantly reduce the chance of remission(51%). No mortality was seen, but 2(1.6%) patients experienced major complications.

Conclusion: Mini Gastric Bypass significantly controls T2DM in patients with BMI < 35 kg/sq.m. Early intervention in low BMI patients yields better remission.

O.795

GASTRIC PERFORATION DUE TO INTRAGASTRIC BALLOON

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Background: Intra-gastric balloon has been used as a method to reduce weight for low body mass index patients, for esthetic purposes or as preoperative preparation in super obese patients. This is the video of a serious complication: a gastric perforation with peritonitis secondary to a prolonged use of the balloon.

Methods: A 26 years old female patient with BMI: 29 arrived at the emergency department complaining of vomiting, diarrhea, and pain in the left upper quadrant. She has had for seven days, worsened in the last 48 hours. On physical examination she has dehydration, pain and tenderness. She has had an intra-gastric balloon for a year.

Results: An abdominal CT scan done two days before shows a dilated stomach with an ulcer in the body. Perforation is not clear. Endoscopy shows the ulcer, very deep, covered in fibrin, not allowing to see if there is perforation. After the endoscopy the patient has more pain and thorax X-ray showing pneumoperitoneum. On laparoscopy there is generalizad peritonitis with a perforated ulcer in the greater curvature that is sutured with an omental patch. Patient had a good recovery, with antibiotic treatment for Streptococcus and C albicans. Histopathology reported ischemic necrosis of the ulcer wall. The patient remained well on follow-up.

Conclusions: Gastric perforation due to intra-gastric balloon is a serious and life threatening complication. May be caused by ischemia secondary to excessive pressure to the stomach wall. Laparoscopic treatment achieves good results and allows a faster recovery

O.802

ROUX-EN-Y GASTRIC BYPASS VERSUS GASTRIC BANDING FOR MORBID OBESITY.A CASE-MATCHED STUDY OF 442 PATIENTS, OVER A 10-YEAR PERIOD.

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Objective: Gastric banding (GB) and Roux-en-Y gastric bypass (RYGBP) are used in the treatment of morbidly obese patients. We hypothesized that RYGBP provides superior results.

Methods: We have made a matched-pair study in patients with a body mass index (BMI) less than 50 in a university hospital and regional community hospital. Four hundred forty-two patients were matched according to sex, age, and BMI being similar between groups.

Results: After matching there were 221 patients for each technique with similar groups according to sex, age and BMI. The mean age was 38.5 in GB group and 38.7 in RYGBP. There was a majority of female (f/m 7:1). Mean BMI at 0, 5 and 10 years for GB was 43, 32 and 32.5 respectively. For RYGBP it was 43, 29.3, 29.9, respectively. Follow-up was 85 % at the end of the study period (10 years postoperatively). Weight loss was quicker, maximal excess body mass index lost (EBMIL) was greater (57.5 % vs 71.7 %, $p = 0.009$), and weight loss remained significantly better after RYGBP until the tenth postoperative year. 53.4 % in GB group had lap band removal. At 10 years, there were more failures (BMI > 35 or reversal of the procedure/conversion) after GB (86 % vs 38.3 %, $p < 0.0001$). There were more long-term complications (45.9 % vs 9.5 %, $p < 0.0001$) and more reoperations (48.4 % vs 16.7 %, $p < 0.0001$) after GB. Comorbidities improved more after RYGBP.

Conclusion: In this 10-year period Roux-en-Y gastric bypass is associated with better weight loss, resulting in a better long term effect and with less morbidity and mortality comparing gastric banding.

O.803

WEIGHT LOSS, REOPERATIONS AND REFLUX: 10 YEAR RESULTS OF LAP. SLEEVE GASTRECTOMY

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Background: Beside gastric bypass, laparoscopic sleeve gastrectomy (LSG) is the most commonly performed bariatric procedure in Austria. For the long-term follow-up, the durability of the weight loss success and the incidence of clinically relevant gastro-oesophageal reflux are still under discussion.

Method: In this retrospective study, patients from three bariatric centres (Medicine University Vienna, Hospital Klosterneuburg and Hospital Rudolfsstiftung Vienna) with a follow-up of 10 or more years after LSG were included. Weight loss success, weight regain and the incidence of revision surgery was analysed as well as Quality of Life (QoL), which was surveyed by standardized questionnaires (BAROS, SF36, GIQOL, RSI, BQL). Gastro-oesophageal reflux was assessed by gastroscopy (with biopsy) as well as manometry and 24-hour pH-metry.

Results: Overall, 53 patients underwent LSG until the end of 2005, at one of the three bariatric centres. The mean operative weight was 134 ± 20 kg, corresponding a mean BMI of 47.7 ± 7.3 kg/m².

During the 10 year follow-up, a total of 19 of the 53 patients (36%) were converted to a gastric bypass due to significant weight regain or reflux. We present in detail weight loss data and the results of the gastroscopy, manometry, 24-hour pH-metry as well as data on QoL.

Conclusion: In LSG patients with a long-term follow-up of 10 years or more, a high conversion rate to a gastric bypass was observed. To make a statement on the incidence and relevance of postoperative reflux after LSG, the results of this ongoing study must be awaited.

O.814

PREGNANCY AND BARIATRIC SURGERY, A NEW PARADIGM

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Introduction: A large epidemiologic study of Whitaker et al on 7,000 children showed an unquestionable trend towards obesity for the children born from obese mother and father. That study reinforces our clinical bias that morbid obesity is an inborn disease. Our first motivation came from babies born from quoted infertile morbidly obese women, who, months after their bariatric surgery, gave birth. Over the years our obesity research group published about newborn, children, adolescents, insulin resistance, and genomic phenomenon.

Methods: The first study can be classified as a morphological study in which the population was made of 133 mothers with children born after surgery. Sibling consisted of 89 children born before surgery and 183 after their mother's surgery. The second stage of our work is a metabolic study, for which we were looking for mothers with children born before and after surgery, 31 out of 42 mothers accepted to participate and we could count on 92 children equally divided and pre and post-surgery group. For the third stage we brought in our genomic colleagues to set a genetic study to look at transmission of poor response to insulin. The tool was to measure Methylation on DNA and genetic expression on RNA. That work proceeds over a three years period; it relies on micro-array

preparation, 2 for each child, one for Methylation and one for expression. The specimens were from 50 children, 25 born before and 25 after their mother's surgery.

Results: As far as the morphological change are concerns in post mother's surgery, the BMI diminish by 36 %, obesity diminish by 52 %, and morbid obesity by 77 %. For children, we see a trend to obesity 3 times slower for the after mother surgery group. The progression of abdominal obesity with aging is almost flat in after mother's surgery. Insulin resistance from homeostatic model assessment, decrease significantly in underweight, obese and still morbidly obese subject. Our study show differential Methylation in 3 % of the genes, the 3 % are for CpG sites statistically different between before surgery versus after surgery as far as Methylation is concerned.

Conclusions: The morphologic study showed a 67 % decreased for morbid obesity, chance for obesity is two times slower and for abdominal obesity five times slower. The conclusion of the metabolic study is that poor response to insulin is the highway to obesity. The genomic works show that we now know the way; bariatric surgery has a direct impact both post-mothers surgery on phenotype transmissible on newborn in relation to insulin resistance facilitating disease onset. Morbid obesity is a genetically transmissible disease. The newborn got obesity gene from his mother. Our preventive tasks should be to target at first, women before the first pregnancy.

O.816

BPD-DS: 9000 PATIENT YEARS OF FOLLOW-UP.

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Introduction: At Laval University, BPD-DS became our procedure of choice in June 1990.

Aim: To summarize our post-surgical experience with open BPD-DS as a primary procedure on 549 consecutive patients before April 1999, BMI 49.6 +/- 9.4.

Method: Report last follow-up outcome at 16.4 years (range: 15-22) (90% f/up)

Results: Initial open BPD-DS operative mortality was 1.46% (operative mortality in our last 1409 patients, 701 open and 708 laparoscopy, was 0.07%). Revision surgery occurred: bowel lengthening for malnutrition in 4 patients, complete reversal in 8 patients for various reasons, 24 revisions for unsatisfactory weight loss (15 cases to shorten bowel, 15 re-sleeve gastrectomy, both procedures in 6 patients). Fifty % (50 %) initial excess weight loss was attained in 81%. Of those patients with an initial BMI > 50, 78% reached a BMI < 40, and 86% of the patients with an initial BMI ≤ 50 kg/m² obtained a BMI < 35. Failure to lose 25% of initial excess weight was 2.9%. Patient survival to date was 89.3%. Patient satisfaction assessed by questionnaire was 95% for overall result.

Conclusion: Long term weight outcomes after BPD-DS resulted in few revisions and high patient satisfaction. BPD-DS is a bariatric procedure to which others procedures should be compared.

O.818

FEASIBILITY OF SINGLE STAGED LAPAROSCOPIC ASSISTED TRANSGASTRIC ENDOSCOPIC SPHINCTERECTOMY WITH CHOLECYSTECTOMY FOR PATIENT PRESENTING WITH CHOLEDOCHOLITHIASIS AND SYMPTOMATIC CHOLELITHIASIS POST GASTRIC BYPASS.

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Background: Post bariatric surgery increased incidence of cholelithiasis with or without choledo -cholithiasis has been reported, especially after gastric bypass procedures, detection of choledocholithiasis remains a diagnostic and therapeutic challenge. .However we performed single stage lap cholecystectomy and lap assisted transgastric Endoscopic sphincterectomy with CBD stone extraction in few cases.

Methods: Standard ports placed for lap chole and calots dissected A15-mm left upper quadrant trocar is then placed. A purse-string suture is taken on the anterior wall of the stomach and gastrotomy is made using ultrasonic shears. The flexible endoscope was then inserted through the 15-mm trocar, Endoscopic sphincterectomy with stone extraction was done. Gastrostomy was closed with sutures. Lap cholecystectomy was completed

Results: In our retrospective 5 year analysis we found five Gastric bypass patients reported to us with post operative common bile duct stone at 1-4 yr duration of follow up. All five patients underwent successful laparoscopic transgastric endoscopy with sphincterectomy and stone removal. Four patients underwent concomitant lap cholecystectomy.

Conclusion: Laparoscopic transgastric endoscopy with sphincterctomy and CBD stone extraction is a safe and minimally invasive approach with good outcome in patients who have undergone Roux-en-Y gastric bypass.

O.803

LONG-TERM EFFICACY (5 YEARS) OF THE SLEEVE GASTRECTOMY IN THE TREATMENT OF TYPE 2 DIABETES.

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Introduction: Efficacy of bariatric surgery techniques on improvement of type 2 diabetes is well known. Several studies have highlighted the short and mid-term results of sleeve gastrectomy in this area. However, there is still few long-term analyzes.

Methods: Since 2005, our team has been setting a database to assess the impact of bariatric surgery on weight loss and comorbidities. This is a retrospective evaluation of a cohort of morbidly obese T2DM patients operated with a sleeve, between 2006 to 2009.

Results: Among 355 severe or morbidly obese patients operated, 53 (14.9%) were being treated for T2DM, 31 women (58.5%) and 22 men (41.5%). The mean age was 50.3 ± 10.3 years [24; 67], Preoperative mean BMI was 48.2 ± 10.2 kg /m² [32; 82] and HbA1c was 8.30 ± 1.72 g/dL[5.9; 12.8]. 72% of patients had HbA1c > 6.5%. Period between diabetes onset and surgery was 10.4 ± 10.7 years [0; 39]. Three (5.46%) patients were insulin dependent, 5 (9.43%) used insulin and oral hypoglycemic agents (OHA) and 45 (85.1%) were treated only with OHA. At 5-year post-operative follow-up, the mean weight among previous diabetic patients dropped to 94.7 ± 17.3 kg [71; 144] and BMI to 34.8 ± 6.13 kg / m² [25.4; 50.0]. Average HbA1c was 6.62 ± 0.91 g / dL [4.8; 9,1]. Thirty (56.6%) of patients had stopped their diabetic treatment and four were insulin free. Eighteen (34.0%) improved in their therapeutic; 5(9.43%) got worse and 2 (3.77%) developed new-onset insulin regimens. Twenty eight (52.8%) had HbA1c lower than or equal to 6.5%.

Conclusion: Sleeve gastrectomy confirms its long term efficacy in improvement of type 2 diabetes.

O.827 EVALUATION OF CLINICAL PERFORMANCE OF STAPLE LINE BUTTRESSING SEAMGARD FOR PREVENTION OF EARLY COMPLICATIONS IN SLEEVE GASTRECTOMIES IN A SPECIALLY SUSCEPTIBLE POPULATION

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Introduction: Early postoperative morbidity, specially hemorrhage (1- 15%) and leaks (0- 5,5%) are the major drawbacks of sleeve gastrectomy

Objective: Evaluate the efficacy of SEAMGARD®(Gore), in cases at a particular risk of bleeding complications and assess the socio-economic impact of this technique in the short term.

Methods: A retrospective, observational, monocentric and comparative study was conducted. All consecutive patients at special risk of bleeding (HAS, anticoagulant therapy, SAS, age > 60 years, DM2, BMI > 50 or previous gastric surgery) admitted to Montpellier University Hospital bariatric surgery department for sleeve gastrectomy were included. From July 2013 to January 2014, 116 patients were operated without buttressing. From January 2014 to September, 86 received Seamgard ®(Gore).

Results: Baseline characteristics concerning age, gender, pre-operative weight and BMI, and risk factors for bleeding as well as mean hospitalization were similar between groups.

There were 2 (2.3%) cases of gastric fistula medically treated in the SEAMGUARD group and four (3,8%) in the control group. There were no bleeding complications in the 86 patients who received Seamguard, but 10 (8.6%) in the control group; 4 had to be reoperated.

Conclusion: For bleeding risk patients the use of Seamgard was definitively a better option than not buttressing the staple line.

O.831 T2DM: EVOLUTION AFTER BARIATRIC SURGERY. RANDOMIZED CONTROLLED TRIAL COMPARING SLEEVE GASTRECTOMY, LAPAROSCOPIC GREATER CURVATURE PPLICATION AND METABOLIC GASTRIC BYPASS.

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Introduction: The mechanism responsible for Type 2 Diabetes Mellitus (T2DM) improvement after obesity surgery are unwell describes and in the new techniques such as greater curvature plication are unknown yet. The fact of our study is to understand gut, bone hormones and ponderal changes implicate in glucose homeostasis after surgery.

Methods: Forty-five morbid obese patients were randomized to Metabolic Roux-en-Y Gastric Bypass (RYGB), sleeve gastrectomy (SG) and Laparoscopic Greater Curvature Plication (LGCP). Both groups were comparable regarding age, BMI 35-43kg/m², A1C $7,7 \pm 1,9\%$, T2DM mean duration 10 ± 5 years and comorbidities. The follow-up period was 12 month. To define T2DM remission and improvement we use ADA 2015 criteria. We compare each group and different hormonal and anthropometric changes to achieve a GLP-1 difference.

Results: At 12 months, excess weight loss (%EWL) was greater in RYGB group in 86,2% compares with 71,15% in SG and 48,4% in LGCP. The metabolic improvement was observed in all groups, RYGB achieved the best results with A1C of $5.09 \pm 0.6\%$, compared with SG and LGCP group with 6.21 ± 0.8 and $7.15 \pm 2,5\%$, respectively ($p < 0.001$). We observed remission T2DM criteria in 85,7% of RYGB patients while it was only in 26,7% of SG and 20% of LGCP ($p < 0.001$). Despite the outcomes, 60% of patients with SG and 46,7% patients with LGCP demonstrated T2DM improvement.

Conclusions: RYBP was better than SG and LGCP to improve T2DM evolution. We are processing the samples to analyse the insulin-incretinic axis, gastrointestinal and proinflammatory hormones that contributes to our results conclusions in each technique.

O.836**SURGERY FOR OBESITY IN ADOLESCENT SEEN AS A PART OF AN INTEGRAL INTERDISCIPLINARY APPROACH****Martin Sykora**, Urs Schumacher, Cristiana Milone, Claudia Ruchti, Manuela Zihlmann, Marcus Townend, Patrick Pasi*Luzerner Kantonsspital, Adipositaszentrum, Lucerne, Switzerland***Background:** Dealing with obesity most studies and therapies focus only on weight. With children and adolescent weight is the beginning for an integral approach in our centre.

A team from different disciplines (paediatrics, psychiatry, psychology, social worker, dieticians, physiotherapists, surgeons) was formed to treat patients from 10 years and older with obesity. As important as weight are psychological stability, self-esteem, social problems and support and involving of the parents. Surgery is just one piece in the therapy. With good selection the results of surgery should be improved.

Methods: Operated patients were analysed prospectively and retrospectively in a single centre.**Results:** 11 Patients under the age of 18 were operated. 10 sleeve resections and one gastric bypass. No major complications occurred. Patients were operated between 2010 and 2015. Follow up longer than 9 months showed a drop of BMI from 43.3 to 28.4 kg/m².

100% are seen regularly by the interdisciplinary team and are getting required support. 100% of the patients are under control regarding vitamins and micronutrients. 100 % feel a substantial improvement in life quality and do not regret surgery.

Conclusions: Surgery is very effective and can be performed safely. But other subjects besides weight loss are as important for a long-term success. The adolescent have to be selected for operation carefully and accompanied by the same interdisciplinary team before and also years after operation.**O.837****COMPARATIVE STUDY BETWEEN SINGLE STAGE (MINI-BYPASS) VERSUS 2 STAGED OPERATIONS (SLEEVE GASTRECTOMY FOLLOWED BY MINI-BYPASS) FOR MANAGEMENT OF SUPER-SUPER OBESE PATIENTS WITH BMI OVER 60 KG/M²****Mohamed Mahfouz,MD**, Ahmed Hussein Abdelhafez ,MD*Dept. of general surgery, Ain Shams university, Cairo, Egypt***Introduction:** Managing super-super obese patients has been a matter of debate, whether to choose single or 2 staged procedures for better results.**Objectives:** Comparing single versus 2 stages procedures in managing patients with BMI>60 kg/m²**Methods:** This prospective randomized study was held in Ain-Shams university hospitals between March 2010 and Jan 2015 over 28 patients with BMI>60kg/m²,divided into 2 equal groups; (A) underwent mini-bypass only and group (B) underwent sleeve gastrectomy followed 16-18 months by mini-bypass, BMI and co-morbidities were assessed 3 years after the bypass procedure.**Results:** Pre-operatively group A mean age was 37.2±9.95, average BMI 66.2±3.8 versus 36.1±8.5 with average BMI 67.07±3.9 for group B. Group A had 7 diabetics, 9 hypertensive and 8 sleep apnoea versus 8 diabetics, 7 hypertensive, 9 sleep apnoea in group B. The average BMI after 3 years of follow up decreased to 41.4±6.06 in group A versus 34.4±5.51 in group B, also co-morbidities showed resolution of diabetes in 5 (71%) versus 6 (75%) patients, hypertension 6 (66%) versus 6 (85%) patients and sleep apnea 7 (87.5%) versus 8 (100%) patients in group A versus B respectively.**Conclusion:** two-staged bariatric procedures were superior to single stage gastric bypass regarding weight loss and resolution of co-morbidities in patients with BMI>60 kg/ m².**O.839****REVISIONAL SURGERY FOR WEIGHT REGAIN OR INSUFFICIENT WEIGHT LOSS AFTER GASTRIC BYPASS SURGERY USING THE MINIMIZER-RING: SHORT TERM RESULTS OF A MULTICENTER STUDY****Jody Valk**¹, Leo Hendrickx¹, Amna Abdelgabar¹, Wendy Schijns², Edo Aarts², Ignace Janssen², Frits Berends², Karl Peter Rheinwalt³, Svenja Schneider³, Andres Plamper³¹ ZNA Stuivenberg Hospital, Antwerp, Belgium² Rijnstate Hospital, Arnhem, The Netherlands³ St. Franziskus Hospital, Cologne, Germany**Introduction:** For almost two decades now the roux en y gastric bypass (RYGBP) is considered the golden standard in bariatric surgery. Although initial weight loss can reach over 80% excess weight loss in the first two years after the RYGBP, long term results show much lower percentages. This indicates that there must be a substantial group of patients with insufficient weight loss or weight regain. Loss of restriction is commonly mentioned by these patients suggesting that adding new restriction can help these patients**Method:** In a multicenter retrospective study 52 patients (48 females, 6 males) with insufficient weight loss or weight regain after RYGBP were treated by banding the bypass pouch with the non-adjustable 'MiniMizer Ring' between 2012 and 2015. Data was collected on weight loss after the RYGBP, weight regain, weight loss after banding the bypass and safety

Results: The mean age and BMI before RYGBP were 36 years (17 – 60) and 43.7 kg/m² (32;7 – 61.7) respectively. Mean lowest BMI after RYGBP was 30.7 kg/m²(22.5 – 50.5) and mean BMI at time of Banding the bypass was 37.1 kg/m² (28 – 44.9) with a mean BMI after one year of 32 kg/m² (24.0 – 39.8). Banding the bypass was associated with pouch reduction (N=16), resection blind loop (N=2) or a combination of both (N=7). After one year follow up additional weight loss was seen in 95% while 5% did not lose additional weight.

Conclusions: Data from this study supports the idea that adding restriction by banding the pouch of the RYGBP can restore part of the initial restrictive effect of the gastric bypass leading to additional weight loss. It is a safe procedure to perform if it is not associated with pouch reduction. More data however is needed on the long term effect of this procedure

O.840 EXPERIMENTAL STUDY IN A NON OBESE RAT MODEL, OF A SIMPLE FOOD-DIVERTING OPERATION FOR TYPE 2 DIABETES TREATMENT AND PRELIMINARY RESULTS IN HUMANS WITH BMI 28-32.

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Introduction: We studied the feasibility of a side-to-side jejunoileal anastomosis (SJA) to control type 2 diabetes mellitus (T2DM).

Methods: Seventeen 14-week-old male GK rats were divided into 3 groups:

SJA bypassing 60% of the small bowel length. Rats were observed for 10 weeks after surgery. The body weight, fasting blood glucose (FBG) levels and oral glucose tolerance test (OGTT), were measured. In 4 diabetic patients with BMI 28-32 kg/m² SJA was performed at distance 100 m from the Treitz ligament and 150 cm from the ileocecal valve.

Results: Animals with SJA exhibited normalization of FBG levels from the 1st and up to the 10th post-operative week. OGTT was also significantly better at 3 and 8 postoperative week, compared with sham-operated and control groups. Two of the humans experience complete remission of the Diabetes from the immediate postoperative period and up to 3 years after the procedure. One other patient experience partial diabetes remission and the last patient significantly reduced his daily insulin requirements postoperatively.

Conclusions: Diverting the food and biliopancreatic secretion to the distal small bowel, by a simple SJA, was able to normalize both FBG levels and OGTT in a non obese diabetic rat model and in a small human series.

O.843 THE IMPORTANCE OF THE EDMONTON OBESITY STAGING SYSTEM IN PREDICTING POST – OPERATIVE OUTCOMES AND 30-DAY MORTALITY AFTER METABOLIC SURGERY

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Objective: The Edmonton Obesity Staging System (EOSS) as a novel staging system is a more comprehensive measure of obesity-related diseases and predictor of mortality than BMI. We hypothesized that the EOSS is also important in predicting post – operative outcomes and 30-day mortality after metabolic surgery.

Methods: A retrospective analysis of data collected prospectively on patients undergoing either LSG or LRYGB between 10/2014 and 02/2015 at Sana Klinikum Offenbach, which is a center of excellence for bariatric surgery, was performed. All patients were reviewed applying the preoperative EOSS by Sharma et al.. Data collection included the following: gender, age, body mass index, waist circumference, comorbidities, early - postoperative complications, length of hospital stay and 30 – day mortality.

Results: A total of 138 patients were included. 74 patients underwent LSG (53,62%) and 64 underwent LRYGB (46,37%). Mean BMI was 44,92 kg/m² in LRYGB and 52,78 kg/m² in LSG. Most patients were given an EOSS of 2 (74%); the next common score was EOSS 3 (13%) and EOSS 1 (10%). There was no postoperative complication in EOSS 0 and 1. Postoperative complication and readmission rates for EOSS 2 and 3 were 4.9 % and 14.71 % vs 5.5 % and 16.67 %. No patient died.

Conclusion: The EOSS is fundamental in predicting post – operative outcomes and 30-day mortality after metabolic surgery. EOSS of 2 and 3 are associated with a higher risk of postoperative complications and a longer hospital stay. Patients with EOSS ≥ 2 should always be operated in high volume centers.

O.844 THE COMPLEX RELATIONSHIP BETWEEN WEIGHT LOSS SURGERY AND MENTAL HEALTH. A REVIEW

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Background: Obesity impacts patients not only physically, but can also have a profound impact on mental health. In addition, mental health patients often suffer from weight disorders, either due to the direct effect of mental diseases or as a side effect of medications. Among the therapeutic approaches for obesity, weight loss surgery (WLS) is an alternative for those patients in which medical conventional treatments have failed

Pre-WLS evaluation often includes mental health evaluation, but its assessment varies across different medical teams. The relationship between WLS and mental health (MH) can be bidirectional and highly complex.

The aim of this study is to do an up-to-date review of different aspects in this relationship.

Methods: A comprehensive PubMed search was done in June 2014, using the MeSH terms “Mental Health”, “Obesity” and “Surgery”. This approach produced 263 results. After using the MeSH terms “Mental Health” and “Weight Loss Surgery”, 226 studies were also added. We selected 65 research papers in our analysis, considering those that included objective evaluations on the relationship between WLS and mental health.

Results: The results were divided in four groups:

- a) Regarding the evaluation of MH in WLS candidates
 - a. Teams across the world evaluate MH of WLS candidates with a myriad of different methods and applying different criteria. The most common being the application of mood and anxiety scales.
- b) Regarding the prevalence of Mental diseases in WLS candidates
 - a. Up to 50% of the patients in evaluation for WLS have an active mental disease. Most of them had also a history of prior mental disorders.
- c) Regarding the impact of MH in WLS outcomes
 - a. The evidence that MH affects the final weight in WLS subjects is conflicting, although MH patients might have worse weight outcomes and a higher frequency of medical complications
- d) Regarding the impact of WLS in MH
 - a. Several sources of evidence demonstrate that WLS is associated with a positive impact on MH, either due to a better quality of life, or due to reductions on the severity of mental disorders or cognitive functions.

Conclusions: The relationship between WLS and MH is complex and needs deeper analysis. The need for pre WLS protocolized MH evaluation is based on the high prevalence of mental diseases in WLS candidates and the high degree of variability in the evaluation of MH between surgery groups. Agreeing on similar criteria among different teams would help obtaining more information on these patients, and therefore higher possibilities of a reliable outcome evaluation.

WLS has a complex impact on medical and psychological outcomes, and more research is needed on the topic. WLS seems to improve several outcomes in MH. Hence, the presence of some mental disorders and/or cognitive impairment might become new criteria for the indication of WLS.

O.851

GASTRIC PPLICATION; RESULTS OF 174 CASES AFTER FOUR YEARS

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Introduction: Four years of follow up of gastric plication came to give the real status of this new weight loss procedure. It gives the way that we have to deal with ethically in front of our patients offering what we think is the best for them.

Objectives: We did this study to show the benefits pro and contra of this new procedure.

Method: Patients with BMI 34-42 were selected to do Plication with two lines of sutures one interrupted and the other running using a non absorbable 2/0 prolene sutures.

Results: Laparoscopic Greater Curvature Plication (LGCP) has a good EWL during the first year reaching 73% starting to decrease to 65 in the second year till 52 % after 4 years.

Complication rate; 1/174 leak 3/ 174 gastric obstruction .gastric pain is 32/174 .vomiting and salivation 27/174in the first 3 months. Converted to sleeve till now 17/174 because of unsatisfied weight loss.

Conclusions: LCGP is a good procedure with a low rate of complications but still the sleeve is with better results and maintained weight loss for long period of time. The Gastric Plication can be an option for low BMI (30-35) with a compliant patient not a sweat eater or Bunge eater and ready to modify the style of life accepting the limitations of this procedure.

O.853

PREOPERATIVE ENTEROSCAN WITH CO2 INFLATION TO SUBMIT A ‘TAILORED’ OMEGA LOOP GASTRIC BY-PASS

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Background: The length of the small intestine (LSI) is variable between patients. The omega loop gastric bypass (OLGB) consists in shortening the length of the intestine to a short circuit of about 2 meters. The objective of the study is to evaluate the utility of the enteroscan (ES) to measure the LSI before performing OLGB.

Method: ES is systematically proposed to patients pre-operatively excluding previous bariatric operation and/or intestinal resection. A naso-jejunal tube is placed distal to the angle of Treitz and CO2 is introduced. CT enables the radiologist to measure the LSI. The surgeon measures the LSI per-operatively being unaware of the ES results.

Results: Between February and April 2015, fifteen ES have been realized. The main cause of failure of the examination was the impossibility of getting the catheter to the angle of Treitz. The measurement by the surgeon of LSI has always been possible. There was no post-operative morbidity and mortality. The ES results were variable (3 to 10 meters). The LSI measured by the surgeon presented a margin of error less than 5% compared with the radiologic ones. In 50% of cases, the LSI measured per-operatively influenced the surgeon's choice of the length of the jejunal loop.

Conclusion: ES seems to be efficient even on a small sample (15 patients). It allows predict the length of the jejunal loop prior to OLBG and thereby reduce the risk of malnutrition.

O.854 NON-ALCOHOLIC FATTY LIVER DISEASE AND CARDIOVASCULAR RISK IN MORBIDLY OBESE PATIENTS WITH BARIATRIC SURGERY

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Introduction: Non-alcoholic Fatty Liver Disease (NFLD) comprises a group of pathologies ranging from simple non-alcoholic steatosis to steatohepatitis and cirrhosis.

Current evidence suggests that Obstructive Sleep Apnea/Hypoapnea Syndrome (OSAHS) is a potential candidate for progression to NFLD in obese patients.

NFLD, particularly in its more severe forms, is linked to a higher risk of Cardiovascular Disease (CVD), regardless of underlying cardiometabolic risk factors.

Objectives: To assess non-alcoholic fatty liver disease and its relation with OSAHS and cardiovascular risk factors in morbidly obese patients with bariatric surgery.

Methods: Sixty-three morbidly obese patients with bariatric surgery were studied simultaneously. Sex, weight, BMI, waist circumference (WC), Neck circumference (NC), Blood Pressure (BP), Charlson, the presence of DM, the probability of OSAHS by STOP BANG, glycaemia, insulinemia, HOMA, hepatogram and liver biopsy were analyzed for each patient. Patients were divided according to the result of the liver biopsy in two groups with severe liver disease if they had severe steatohepatitis or any degree fibrosis. They were then compared with patients with mild hepatitis, steatosis and seventeen patients with normal biopsy.

Results: The study included 63 patients with a mean age of 42.16 (10.93). Fifty patients were females (79.4%). Charlson's mean comorbidity was 2.79 (1.06), and mean BMI was 44.47 (6.01). Forty-one (65.1%) patients received a gastric sleeve and 22 (34.9%) received RYGBP. Seventeen patients (26.3%) had Diabetes Mellitus type 2. The biopsies yielded the following results: steatosis: 6 (9.5%), mild hepatitis: 4 (6.3%), severe hepatitis: 2 (3.2%), grade I fibrosis: 24 (38.1%), grade II fibrosis: 3 (4.8%), grade III fibrosis: 7 (11.1%). Seventeen patients (27.0%) had normal biopsies. The 36 patients with severe liver disease were older, had more comorbidities, higher WC and NC, but only SBP and DBP were significantly higher: 130.88 (18.81) vs 121.48 (16.16), p: 0.043 and 83.24 (9.76) vs. 77.63 (10.12) p: 0.032. There was a higher incidence of patients with DM, 16 (37.2%) vs 1 (5.9%) p: 0.015. Insulinemia and HOMA were not significantly higher. GOT and GPT values were higher: 24.44 (14.76) vs. 16.53 (6.13) p: 0.010, 30.84 (24.3) vs 19.92 (8.41) p: 0.001. Patients with severe liver disease showed a significantly higher incidence of OSAHS in the Stop Bang test: 24 (68.6%) vs 11 (42.3%) p: 0.040. Finally, cardiovascular risk at ten years measured by Framingham and UKPDS scores was higher in patients with severe liver disease: 4.03 (4.74) vs. 2.20 (2.69) p: 0.014; 6.24 (7.09) vs. 3.59 (3.63) p: 0.011.

Conclusions: More severe hepatocellular damage detected by the biopsy and liver enzyme tests was significantly associated with higher OSAHS, BP and DM clinical scores as well as higher CVD risk scores at ten years.

O.855 PRE-OPERATIVE IRON DEFICIENCY IN BARIATRIC SURGERY: DIAGNOSIS AND TREATMENT

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Introduction: Chronic inflammation induced by obesity alters iron homeostasis leading to mild/moderate iron deficiency and anaemia. Between 14% and 43% of patients may suffer from iron deficiency without anaemia before surgery. The management of peri-operative iron deficiency improves patient outcome and quality of life. Under certain circumstances intravenous (IV) iron must be considered. IV iron (which may avoid iron blockage in enterocytes and macrophages) has turned out to be a safe and efficient alternative.

Objectives: 1) To assess the prevalence of iron deficiency in morbidly obese patients candidates for bariatric surgery 2) Assess whether supplementation of parenteral iron in iron-deficient patients is effective in preventing the decrease in hematocrit after surgery.

Methods: Prospective, observational study which included 89 morbidly obese patients who underwent bariatric surgery. The population was divided according to whether or not patients had pre-op iron deficiency, and post-op evolution was analyzed. Iron-deficient patients were supplemented with 500 mg of intravenous (IV) carboxymaltose and were evaluated post-op.

Results: Twenty-three patients (25.8%) presented pre-op iron deficiency pre-operatively while six (6.74%) had anemia. 74.2% (66 patients) had no iron deficiency. The group without iron deficiency at one month of surgery had the following laboratory values:

Hematocrit: $41.30\% \pm 3.77$; hemoglobin: $13.64 \text{ g/l} \pm 1.25$ and transferrin saturation: 30.55% . The patients with pre-op iron deficiency had the following values: Hematocrit: $40.40\% \pm 3.03$; hemoglobin: $13.40 \text{ g/l} \pm 1.07$; transferrin saturation: $15.50\% \pm 4.18$, and ferritin: $87.10 \text{ ng/ml} \pm 81.23$. Post-op hematocrit reduction was $38.40\% \pm 3.17$ ($p: 0.034$). In iron-deficient patients without IV iron supplementation ($n=15$), hematocrit and hemoglobin were $41.2\% \pm 2.5$ and $13.7 \text{ g/l} \pm 0.9$ respectively with post-op reduction ($37.5\% \pm 3.4$ and 12.3 g/l $p<0.05$). IV iron supplementation in iron-deficient patients ($n=9$) increased hemoglobin ($13.5 \text{ g/l} \pm 0.7$), compared with the pre-op ($12.8 \text{ g/l} \pm 1.2$; $p: 0.05$), as well as transferrin saturation and ferritin. One month after surgery there were no significant changes in hematocrit (pre-op: 39% , post-op: 40% $p:>0.05$).

Conclusions: 1) Almost 26% of patients present pre-op iron deficiency. 2) Treatment with IV iron seems to be efficient to prevent hematocrit reduction and to improve iron metabolism in pre-op iron-deficient patients. In patients without iron deficiency, hematocrit and iron metabolism remain normal one month after surgery without the need for iron supplementation.

O.860

BARIATRIC SURGERY IN THE ELDERLY

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Background: Obesity and age of the population are increasing in many parts of the world. Although obesity shortens life there is a remarkable percentage of obese patients older than 60 years. In general guidelines restrict bariatric surgery to patients not older than 60 or 65 years. Is this limitation justified in face of the demographic development?

Methods: We identified 169 patients in our database, who received a bariatric operation and were older than 60 years. A retrospective analysis of the prospectively collected data was performed. Patients who did not regularly attend follow-up visits were contacted by phone.

Results: Procedures: RYGB 76%, SG 14%, AGB 5%, miscellaneous 5%. Age distribution: 60-65years: 73%, 66-70y: 21%, > 70y: 5%. Gender: 66% female. Follow-up: 87 – 95%. %EWL after 36 months: RYGB, SG, AGB: 62%,52%,36%. BMI reduction: mean: 10 points. Remission or improvement of diabetes mellitus: 55 and 43%; hypertension: 31 and 29% respectively. Mortality: 0%, early morbidity: 3%, late morbidity 5%. Outcome: marked improvement of mobility (99%), respiratory function (95%) and social contacts (59%); decreased musculo-skeletal pain in 69%.

Conclusion: In the literature bariatric surgery in the elderly increases, the same is to be seen in our institution. Gastric bypass and sleeve gastrectomy are effective procedures and can be performed with tolerable risk. For us the most impressive arguments to propagate bariatric surgery in the elderly are markedly improved mobility and better social contacts by losing weight and reduce comorbidities.

O.868

THE EFFECTS OF BMI ON RESPIRATORY AND HEMODYNAMIC PARAMETERS IN LAPAROSCOPIC BARIATRIC SURGERY: AN OBSERVATIONAL STUDY

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Background and Aim: The patients with $\text{BMI} \geq 40$ are divided into sub-groups. There is little data comparing these sub-groups in terms of hemodynamic and respiratory responses during laparoscopic bariatric surgery. Our aim was to determine the changes in vital parameters and related adjustments in surgical management in patients with different levels of BMI.

Methods: 18-65 year-old, ASA I-III patients were classified into groups; $\text{BMI } 40 \leq x < 45$, $45 \leq x < 50$ and ≥ 50 were defined as Group I, II and III, respectively. Anesthetic management and ventilation strategy were standard. Hemodynamic parameters and SpO_2 were recorded. PaO_2 and PaCO_2 were analysed before pneumoperitoneum, 45th minute of pneumoperitoneum and after release of pneumoperitoneum. Durations of surgery and pneumoperitoneum, intraabdominal pressures and airway pressures were recorded.

Results: Group I($n=24$), II($n=28$) and III($n=24$) were similar in terms of intraoperative hemodynamic parameters and SpO_2 . PaO_2 before pneumoperitoneum in Group III was lower ($239(89-387)\text{mmHg}$; $201.5(85-517)\text{mmHg}$; $155(50-367)\text{mmHg}$) ($p>0.01$). This level in Group III did not reveal significant change during and after pneumoperitoneum. In Groups I and II, PaO_2 revealed significant decrease during pneumoperitoneum ($p<0.001$). Intraoperative PaCO_2 was higher in Group III. Pp in each group had a significant increase during pneumoperitoneum ($p<0.001$). Pp in Group III was higher ($p>0.01$). Intraabdominal pressure was $\leq 14\text{mmHg}$. Pneumoperitoneum was longer in Group III ($37.5(20-55)\text{min}$; $42.5(20-60)\text{min}$; $52.5(20-60)\text{min}$ ($p<0.01$)).

Conclusions: We obtained lower PaO_2 and higher PaCO_2 levels, leading to higher airway pressures in patients with $\text{BMI} > 50$. In future studies, the correlation between gradually increasing PEEP, intraabdominal pressure, urinary output, surgical exposure and duration of both surgery and pneumoperitoneum should be addressed in larger patient groups with high BMIs.

O.869

RESULTS OF SLEEVE GASTRECTOMY IN ADOLESCENT OBESE PATIENTS IN OUR SERIES

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Background: The world is witnessing an increase in health care costs due to obesity and related issues among children and adolescents. Childhood obesity is affecting all socio-economic groups, irrespective of age, sex or ethnicity. Obese children and adolescents in turn are growing up to become obese adults with all the associated co-morbidities. The treatment of overweight and obesity in adolescents requires a multidisciplinary approach. Bariatric surgery is usually considered for those above BMI 40kg/m². Sleeve Gastrectomy, owing to its less stringent postoperative nutritional requirements and with good weight loss results can be considered in adolescent obese patients.

Methods: We retrospectively studied the weight loss in our series of adolescent patients operated between January 2012 and December 2014. All patients had undergone Sleeve Gastrectomy after extensive assessment and nutritional counseling.

Results: 17 patients between the age group of 12-19yrs underwent Sleeve Gastrectomy at our centre between January 2012 and December 2014. Their average age was 17 yrs. Two patients were cases of Prader-Willi syndrome diagnosed pre-operatively. Their average weight reduced from 112 to 83kg and average BMI reduced from 42.74 to 32.23.

Conclusions: Our results show that Sleeve gastrectomy can be considered in the adolescent population as an effective treatment for childhood-onset extreme obesity. As such, the results of this study may be used as a basis for a prospective study to investigate long term outcomes.

O.882

REVISIONAL SURGERY FOR MANAGEMENT OF WEIGHT LOSS FAILURE AFTER GASTRIC BYPASS

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Background: The gastric bypass procedure is one of the most commonly performed bariatric procedures with variable success and Failure rates. Revisional bariatric surgery is an important part of the bariatric surgery practice and revision after failed gastric bypass is occasionally needed. Trimming and banding of the gastric pouch, malabsorptive intestinal configuration and jejunal sleeve are different surgical tools used to treat gastric bypass failures.

Objective: a prospective study evaluating the various surgical techniques used for revising a failed gastric bypass procedures.

Methods: from April 2005 till March 2015, 76 failed gastric bypass patients had a revisional bariatric procedure. 62 patients (81.5%) had an intact Proximal Roux-en-Y gastric bypass, 11 patients had a mini gastric bypass (14.4%), 3 patients (3.9%) had a Roux-en-Y-gastric bypass with gastro-gastric fistula. All patients had a laparoscopic Banded micro-pouch gastric bypass procedure 6 patients had concomitant jejunal sleeve.

Results: 91 % were females mean age 31 years, Mean preoperative BMI was 49.8 kg/m² (39-62 kg/m²) Operative time mean 120 minutes. Hospital stay mean 3.4 days, 2 patients had postoperative leaks (2.6%), 1 patient had pulmonary embolism (1.3%), 1 patient had pneumonia (1.3%). No mortality was encountered. Late complications were band erosion in 3 patients (3.9%) anastomotic stricture in 2 patients (2.6%), excessive weight loss in 2 patients (2.6%). Postoperative weight loss was 76% EBWL at 18 months. 72% EBWL at 36 months, 69% EBWL at 5 years and 66% at 10 years.

Conclusion: LBMRYGB ± jejunal sleeve gives excellent and durable weight loss as a revisional bariatric procedure. Complication rates are higher than the primary group but less than revisional surgery after other bariatric procedures. Appropriate primary and secondary procedure choice remains very essential to reduce treatment failures.

O.888

BARIATRIC SURGERY IN PATIENTS WITH CHRONIC RENAL DISEASE

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Background: Obesity is a risk factor for the development of chronic kidney disease (CKD) through direct or indirect factors. Weight loss may reduce the risk of progression of kidney disease and also it increases the chances of patients with end stage renal disease to receive a renal transplant.

Methods: We performed a retrospective study of patients with CKD who underwent laparoscopic bariatric surgery at 3 high volume centres in London, UK (King's College Hospital, Imperial College Healthcare, and Royal Free and University College London Hospitals) between 2007 and 2012. All three centres specialise in both bariatric surgery and nephrology. 74 patients were identified and the results analyzed with a minimum 1-year follow-up.

Results: 74 patients with CKD who underwent bariatric surgery had a mean age of 52 years and 55.4% were females. The surgeries performed were laparoscopic sleeve gastrectomy (LSG) in 57% (n=42) of the patients, laparoscopic Roux-en-Y gastric bypass (RYGB) in 38% and laparoscopic adjustable gastric banding (AGB) in 5%. Mean % Excess BMI Loss (%EBL) was 61±6 at 12 months. There were 14 adverse events (19%) over the study period, and two deaths (3%) within 30-days post-operatively. Acute kidney injury was the

most frequent complication (4%), followed by a surgical anastomotic leak (3%), acidaemia and hyperkalaemia (3%), post-operative respiratory infection (3%), vitamin B12/iron deficiency (3%), fistula/graft failure (3%), and myocardial infarction (1%).

Conclusions: Bariatric surgery can result in successful weight loss in patients with CKD; however, it is associated with high rate of adverse events and increased risk of mortality.

O.899 ROBOTIC MINI GASTRIC BYPASS SURGERY

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Background: Robotic Roux en Y gastric bypass is being done for some time but is technically difficult, requiring operating in both the sub diaphragmatic and infracolic compartments of the abdomen. This can mean a dual docking of the robot or a hybrid partial laparoscopic and partial robotic surgery. The Mini /One anastomosis /omega loop gastric bypass (MGB) has the advantage of having all dissection and anastomosis in the supracolic compartment and is therefore suitable technically for robotic surgery.

Methods: We have done 178 robotic mini gastric bypass surgeries. The robot is docked above the head of the patient in the midline. Camera port is placed supra umbilically. Two ports are placed on the left side of the patient and one port on the right side of the patient. An assistant port is placed between the camera port and right sided robotic port for use of stapler. Distal stomach is stapled from the lesser curve followed by a vertical sleeve upwards leading to a long sleeve pouch. Jejunum is taken at 200 cm from the duodenojejunal junction and brought up to do a side to side gastrojejunostomy.

Results: All patients had a successful robotic procedure. Mean time taken was 85 minutes. There were major intraoperative or post operative complications. No patient needed conversion or re-exploratory surgery.

Conclusions: MGB / OAGB is gaining worldwide interest as a short simple procedure that has been shown to very effective and safe bariatric surgery. The purpose of this study was to report on the safety and efficacy of robotic surgery for this procedure. This is the first report of totally robotic mini gastric bypass.

O.903 SLEEVE GASTRECTOMY PERFORMED WITH SINGLE PORT TECHNIQUE SILS

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Introduction: Bariatric surgery has been established as the best option of treatment for morbid obesity. In recent years single-incision laparoscopic surgery (SILS) has emerged as another modality of carrying out the bariatric procedures. In this video we describe SILS sleeve gastrectomy (SILS-G) using SILS Port is a technique safe and feasible. SILS is used above all in this bariatric procedure such as adjustable gastric banding and sleeve gastrectomy. This latest procedure requires the extension of a trocar incision for the emission of a drain.

Objectives: In this video we describe SILS sleeve gastrectomy using SILS Port is a technique safe and feasible

Methods: More than 100 SILS Port laparoscopic sleeve gastrectomies were successfully performed using this technique. We performed gastrectomy with endogia 60 with positioning of SEAMGUARD BIOABSORBABLE (Staple Line Reinforcement) GORE that reduces the incidence of postoperative bleeding and leaks. Selection criteria are low bmi, no surgeries in the past, young age (30-40 y.o.)The mean operating time was 45 minutes. There were no mortalities or postoperative complications noted during the follow-up period of all patients.

Conclusion: SILS-G is a feasible and safe operative. There are no differences in operative time. This procedure that leads to a significant reduction of less postoperative pain, a lower need for analgesic and decreased length of hospital stay compared with a multiport access procedure.

O.907 ENDOSCOPIC SLEEVE GASTROPLASTY WITH A FOLLOW UP TIME OF 1 YEAR: PREDICTIVE FACTORS OF SUCCESS

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Background: Bariatric endoscopy has emerged as an important aid in the non-surgical treatment of obesity. The objective of this study was to evaluate different questions related to the results and follow-up of endoscopic sleeve gastroplasty (OverStitch; Apollo Endosurgery, Inc., Austin, Texas, USA) at 1 year of follow-up.

Methods: Prospective, single-center study of 25 (5 men, 20 women) patients who underwent flexible endoscopic suturing for endoluminal gastric volume reduction. A multidisciplinary team provided postprocedure care. Patient status and weight were recorded

at 1 year after the procedure. Linear regression analysis was done to evaluate the variables related with good results at 1 year of follow-up.

Results: Mean BMI was 38.2 ± 4.6 kg/m² (range 30–47) and mean age 44.5 ± 8.2 years (range 29–60). At 1 year, 22 patients continued with the follow-up. There were no major intra-procedural, early, or delayed adverse events. Mean BMI change was 7.3 ± 4.2 and mean %TBWL was 18.7 ± 10.7 at 1 year. Patients improved their physical and food habits in a high percentage. In the multivariable analysis, adjusted by initial BMI, gender and age, variables related with good weight loss results were number of nutritional ($\beta = 0.419$, $p = 0.044$) and psychological controls ($\beta = 0.755$, $p = 0.021$)

Conclusions: The Endoscopic sleeve gastropasty, is a procedure feasible, reproducible and effective to treat obesity. The numbers of nutritional and psychological controls are predictive factors of success.

O.908 ENTEROENDOCRINE CELL POPULATION IS REDUCED IN OBESITY AND RESTORED AFTER SLEEVE GASTRECTOMY (LSG)

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Background: Morbidly obese patients exhibit impaired secretion of satiation hormones cholecystokinin (CCK), glucagon-like peptide 1 (GLP-1) and peptide YY (PYY), which may contribute to the development of obesity. Bariatric surgery is associated with weight loss and dramatic increase in the secretion of satiation hormones, but the underlying mechanism remains unknown. A better understanding of mechanisms involved will assist in development of non-invasive therapeutic strategies.

Methods: Gastric and intestinal mucosa were collected by endoscopy from 14 obese subjects (mean BMI 48.2) before and 3 months post LSG (N=8, mean BMI 38) and 12 lean controls (mean BMI=21.9). Tissue morphology was determined by morphometric analysis. Expression of enteroendocrine cell (EEC) population possessing chromogranin A (marker of EECs), ghrelin, CCK, PYY, GLP1 and GLP-2 was assessed by immunohistochemistry and quantitative PCR. Expression of defensin (a marker of Paneth cells), mucin 2 (goblet cells) and Na⁺/glucose co-transporter 1 (SGLT1) (absorptive enterocytes), at mRNA and protein levels, was determined.

Results: Duodenum: Total number of EECs was significantly ($p < 0.05$) lower in obese vs. lean subjects and was almost (96%) restored post-op. There was a 50% decline in ghrelin expressing cells (almost fully restored post-op), a 54% decrease in CCK cells (restored by 80%), and a decline by 40% and 34% in GLP-1 and GLP-2 cells (increased post-op: 89%). We report for the first time that human duodenum expresses PYY, and that there was a 34% decrease in PYY-containing cells in obese subjects (restored by 54% post-op). There were no changes in villus height/crypt depth suggesting that the decline in EECs is not due to any changes in surface area. There were no significant alterations in expression of SGLT1 and defensin, but dramatic increase in MUC 2 (was reduced post-op by 44%) compared to lean controls. Stomach: There was a decline in the total number of EECs (partially restored post-operatively), reflected in 50% decline in ghrelin (restored by 65%).

Conclusions: In obesity, there is deregulation in developmental programming of EECs expressing various gut hormones. By some as yet unknown mechanism this programming is partly restored post-operatively leading to an increase in the secretion of gut hormones.

O.913 ROBOTIC RECONSTRUCTION OF A ‘REVERSED’ RNYGB IN A PATIENT WITH CONSTANT PAIN AND ALKALINE REFLUX A CASE REPORT

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Background: Roux en Y Gastric bypass (RNYGB) is considered the gold standard of weight loss in morbid obese for the past decades. There are numerous varieties of the surgical technique aiming at different control of obesity and postoperative complications such as alkaline reflux and malabsorption. A rare case of alkaline reflux following a ‘reversed technique’ in a RYGB patient is presented in this paper.

Methods: A 56-year old woman (BMI 23.8), who underwent RYGB 6 years prior to her visit to us (preoperative BMI 42.18), presented to us with crampy, epigastric abdominal pains and severe alkaline reflux. Her history included a laparoscopic cholecystectomy and hiatal hernia repair during the RYGB procedure. We performed a complete preoperative workup including a magnetic enterography. Surgical exploration was offered to the patient as the best way to identify and restore her complaints.

Results: A robotic approach was selected for better visualization and dexterity of the instruments in the case of anticipated technical difficulty. Soon after creation of the pneumoperitoneum the previous procedure was assessed. The gastric pouch was found to be anastomosed to the afferent loop at a short distance from the ligament of Treitz, thus explaining the symptomatology of the patient. After division of the afferent loop with GIA, we reconstructed the anastomosis 100cm distally and added a Brown anastomosis to divert the alkaline content. The robotic system facilitated the intracorporeal suturing of the anastomoses. A no19 Jackson Pratt drain was put in

place. Patient followed a normal postoperative course and was discharged on the 3rd postoperative day. Immediately after the operation her pain and the irritating reflux disappeared and the results sustained in the follow up period.

Conclusions: In inexperienced hands the complications of gastric bypass can be deteriorating for both the patient and the surgeon. Experience of the operating team in bariatric surgery and surgical technique are of extremely high importance for optimal results after this procedure.

O.919 REVISIONARY LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS (LRYGB) FOR FAILED VERTICAL BANDED GASTROPLASTY (VBG)

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Introduction: Revision of failed bariatric procedures is a significant challenge for bariatric surgeons, because of the increasing number of recurring morbid obesity or complications, especially in patients with a previous Vertical Banded Gastroplasty (VBG)

Material and Methods: Since April 2007, 42 patients with failed VBG were followed in a retrospective study. 14 patients underwent Laparoscopic Sleeve Gastrectomy (LSG) and 28 patients underwent Laparoscopic Roux en Y Gastric Bypass on Vertical Banded Gastroplasty (LRYGB on VBG).

Results: At 4 years follow-up, mean BMI decreased from 44 to 36 in the first group, and from 47.2 to 32 in the second. Early complication were 5 (35.7%) in the first group and 4 (14.2%) in the second. Late complications were 7 (58.3%) and 5 (17.8%), respectively.

Conclusion: Although both operations seem to be effective as bariatric revision procedures in terms of BMI, the mid-term outcomes of RYGB -on- VBG demonstrate the lowest rate of complications and better quality of life

O.923 SLEEVE GASTRECTOMY AND GERD: HOW DO WE REDUCE AND MANAGE THE INCIDENCE

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Introduction: One of the most reported adverse events after Sleeve Gastrectomy is GERD. The range of this complication ranges from 6% to 36% in various studies. This presentation looks at ways of preventing reflux with a systematic pre and per operative approach, as well as surgical and non-surgical management of this this distressing complication in the immediate and late post op period.

Objectives: to review the literature on the Identification and Diagnosis of GERD Pre- operatively before Sleeve Gastrectomy and in the early and late post operative period and to demonstrate the Operative and Non-operative Management of GERD

Literature review shows that the incidence of GERD post Sleeve Gastrectomy may range from 6% to 36%. This may be a preventable complication if appropriate measures are taken in the lead up to the operation and pro-actively seeking out and repairing the hernia during the surgery.

Methods: Literature review to assess the incidence of GERD post Sleeve Gastrectomy. Adopting a systematic policy of looking for the presence of a Hiatal hernia preoperatively and intra-operatively and then taking steps to carry out a repair. The presentation also discusses the management of GERD when the incidence happens a few months or years after LSG

Results: By following a systematic policy of identification and management of GERD during Sleeve Gastrectomy, we have been able to reduce the incidence of GERD to a minimum. The results of a patient follow up 3-5 years post op and reviewed and presented.

Conclusions: By following a systematic approach of preoperative identification, per-operative technique and post op management with endoscopic dilatation, the incidence of GERD can be reduced.

O.930 REVISIONAL BARIATRIC SURGERY IN THE HAND OF YOUNG BARIATRIC SURGEON

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Introduction: Redo surgery after failed open vertical banded gastroplasty for morbid obesity is technically demanding and becoming common particularly in Egypt because many surgeons are still practicing such operation till now. The incidence of complications is higher, and the possibility of doing the planned bariatric procedure may not be feasible in one session due to inflammation, scarring, and bleeding. Both patient and surgeon need to be aware that a new operation will be a difficult task, and realistic goals have to be presented to the patient.

Objectives: Evaluate the safety of doing revisional bariatric surgery by the hand of young surgeon after good training and adequate planning to achieve good outcome.

Methods: Detailed evaluation of the preoperative data and operative notes were done. Imaging and endoscopic studies were necessary to study the problem and give an accurate map of the existing anatomy. Laparoscopic approach was the preferred method.

Results: Weight regain after VBG was the reason for revision in all cases. Our patients were 1, 8 and 15 years postoperative. Mean age 55 ± 11.7 years and mean BMI 44.6 ± 5.5 . Pouch dilatation was detected in all cases. Mean operative time was 155 ± 20 minutes two cases received blood transfusion. Mean Hospital stay was all cases were converted into Minigastric bypass with common channel 3 meter measured from the ileocecal valve.

Conclusions: Revisional bariatric surgery is technically challenging. Good outcome can be achieved by young bariatric surgeon after

O.932 RANDOMISED CONTROL STUDY ON EFFECTS OF “EHEALTH” AND “INTERNET OF THINGS” IN BARIATRIC SURGERY

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Introduction: Being a life style disease, bariatric surgery needs eHealth more than any other surgical speciality. Though various eHealth services like Electronic health records, ePrescribing, Clinical Support, Telemedicine, Healthcare Information Systems, Data Analytics and mhealth are available there was no one hardware-software combo IOT (internet of things) to exploit these systems to full potential in Bariatric surgery

Objectives: To study the effects of eHealth and IOT in Bariatric surgery

Methods: A total of 138 patients were management through an indigenously designed IOT between Jan 2014 to Dec 2014 randomized into two groups (control & trial) of 69 each. The endpoints were measured through global rating scale (GRS) and Visual analog scale (VAS). An innovative touch screen table top for doctors, desktop EHR and HIS, tablets and mobile with bariatric specific software was used for real-time documentation, education, follow-up, support system and data analysis.

Results: GRS suggested a significant increase (94%) in patients who follow protocols in trial group compared to 82% in control group. VAS too suggested a significant increase (9.6 vs 8.6) in patient satisfaction towards “T”, significant improvement of patient involvement (9.6 vs 7.3) post surgery due to mobile, significant outcome (9.4 vs 8.2) in quality of life were observed though analytics.

Conclusions: eHealth is a very important part of patient outcome, especially for bariatric surgery. IOT and mHealth contribute to major significance in regular follow-up and better quality of life.

O.939 RESULTS OF IMPLEMENTING AN ENHANCED RECOVERY AFTER BARIATRIC SURGERY (ERABS) PROTOCOL

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Introduction: With the increasing prevalence of morbid obesity and healthcare costs in general, interest is shown in safe, efficient and cost-effective bariatric care. This study describes an ERABS protocol and the results of implementing such protocol on procedural times, length of stay in hospital (LOS) and the number of complications and reinterventions.

Materials and Methods: Results of implementing an ERABS protocol were analyzed by comparing a cohort treated according to the ERABS protocol (2012-2014) with a cohort treated before implementing ERABS (2010-2012). Differences between both cohorts were analyzed using independent t-tests and chi-squared tests.

Results: A total of 1.967 patients (mean age 43.3 years, 80% female) underwent a primary bariatric procedure between 2010 and 2014, of which 1.313 procedures were performed after implementation of ERABS. A significant decrease of procedural times, such as mean length of stay in the operation room (84.6 to 72.8 minutes, $p < 0.05$), and a significantly decreased LOS, from 3.2 to 2.0 nights ($p < 0.001$) were seen after implementation of ERABS. Significantly more complications were seen post-ERABS (16.1% versus 20.7%, $p = 0.013$), although no significant differences were seen in the number of major complications and reinterventions.

Conclusion: Implementation of ERABS can result in shorter procedural times and a decreased LOS, which may lead to more efficient and cost-effective bariatric care. Even though the number of complications increased after implementation, the number of major complications and reinterventions did not change. Therefore, by implementing an ERABS protocol, costs of bariatric care may be reduced without compromising the safety of the patients.

O.942 METABOLIC OUTCOMES OF LAPAROSCOPIC DIVERTED SLEEVE GASTRECTOMY WITH ILEAL TRANSPOSITION (DSIT) IN OBESE TYPE 2 DIABETIC PATIENTS

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Background: Bariatric surgical techniques are based on mechanical restriction rather than functional restriction. Our purpose is to analyze the outcomes of diverted sleeve gastrectomy with ileal transposition (DSIT) as a mode of functional restrictive therapeutic option for class II and class III obese type 2 diabetes mellitus patients.

Methods: Retrospective analysis was performed on data derived from 159 patients with type 2 diabetes mellitus underwent DSIT between October 2011 and January 2014. Postoperative changes in body mass index (BMI), HbA1c, cholesterol indexes, triglycerides, as well as complications and mortality rates were noted and analyzed.

Results: The study group consisted of 88 females and 73 males, with a mean age of 51.8 years. Mean duration of follow-up was 18.3 months and no mortality was detected. Mean BMI decreased from 39.33 to 25.51 kg/m² (excess BMI loss rate was 75.4%, $p < 0.001$). Mean fasting glucose level decreased from 189.8 to 123.5 mg/dl ($p < 0.001$), and mean postprandial glucose from 246.1 to 179.4 mg/dl ($p < 0.01$). Triglycerides decreased from a mean of 210.07 to 125.24 mg/dl and cholesterol from a mean of 208.34 to 163.23 mg/dl ($p < 0.001$ for each). Hypertension was resolved in 152 cases (95.6%, $p < 0.001$). Mean HbA1c decreased from 9.24 to 6.14% one year after surgery ($p < 0.001$). Overall, 88.68% of patients were off antidiabetic medications and 95.6% of patients reached normal blood pressure levels without medication.

Conclusion: Our results demonstrate that DSIT provided effective remission rates in all components of metabolic syndrome in obese type 2 diabetic patients with acceptable complication and mortality rates.

Keywords: Obesity; diabetes mellitus; metabolic syndrome; treatment; surgery; laparoscopic diverted sleeve gastrectomy with ileal transposition.

O.943

HOW CAN A SURGICAL REGISTRY BE MADE FULLY COMPREHENSIVE, AN EXAMPLE FROM SOREG

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/For the SOReg Steering committee/

Background: Obesity surgery is expanding, the quality of care is ever more important and learning curve assessment should be established. A large registry cohort can show long-term effects on obesity and its comorbidities, complications and long-term side-effects of surgery, as well as changes in health related quality of life (QoL). Sweden is ideally suited to the task of data collection and audit, with universal use of personal identification numbers, nation-wide registries permitting cross-matching to analyse causes of death, in-hospital care and health-related absenteeism.

Method: In 2004, the Scandinavian Obesity Surgery Registry (SOReg) was initiated and government financing secured. A project group created a national database covering all public as well as private hospitals. Data entry was to be made online, operative definitions of comorbidity were formed, and complication severity scored. Several forms of audit were devised.

Results: After pilot studies the system has been running in its present form since 2007. Since 15 January 2013 SOReg covers all bariatric surgery centres in Sweden. The number of operations in the database exceeded 40,000 (March 2014), with a median follow-up of 2.94 years. Audit shows that >98% of data are correct. All results are publicized annually on the Internet.

Conclusions: Using this systematic approach it has been possible to cover >99% of all bariatric surgery, cross-matching our data with nation-wide registries for in-hospital care, cause of death and permitting regular nation-wide audit. Several scientific studies have used, or are using, what seems to be the most comprehensive database in obesity surgery.

O.944

CHANGE IN COMORBID DISEASE AND WEIGHT FIVE-YEARS AFTER PRIMARY GASTRIC BYPASS: A PROSPECTIVE COHORT STUDY FROM THE SCANDINAVIAN OBESITY SURGERY REGISTRY

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For the Scandinavian Obesity Surgery Registry Study Group

Introduction: Long-term (≥ 5 years) results after Roux-en-Y gastric bypass (RYGB) are scarce. The aim of this study was to examine the remission obesity related co-morbid disease (type 2 diabetes, hypertension, dyslipidemia, depression and sleep apnea), changes in corresponding laboratory data and weight development with five-year follow-up data from the Scandinavian Obesity Surgery Registry (SOReg) database.

Material and methods: 26 119 individuals (BMI 42.9, 41.0 years, 75.8% women) who underwent a primary RYGB (95.1% laparoscopically) between 2007-2012. Five-year follow-up was 45.2%. Comorbid disease was present if the patient had ongoing pharmacological treatment (CPAP for sleep apnea).

Results: At five-year follow-up, the prevalence of diabetes was reduced from 14.7% to 7.5%, hypertension (24.9% to 20.0%), dyslipidemia (10.0% to 6.3%) and sleep apnea (9.6% to 2.6%), all $p < 0.001$. In general, high age or high BMI at baseline were negative prognostic factors, while a greater weight loss increased the chance of remission. In contrast, the use of anti-depressants increased from 13.8% to 18.4%. Overall, laboratory status was improved, fasting glucose and glycated hemoglobin decreased from 6.1 to 5.4 mmol/mol and 41.8 to 37.7 mmol/mol, respectively. BMI decreased from 42.8 to 31.2 kg/m², corresponding to a 27.7%-reduction in total body weight. Waist circumference decreased from 127 to 100 cm.

Conclusions: Gastric bypass resulted in substantial improvements in comorbid diseases and weight loss over the five-year period. Most profound changes were seen in sleep apnea (3 out of 4 stopped CPAP) and the 49%-remission in diabetes. The increased use of antidepressants warrants further investigation.

O.945 TWO YEARS READMISSIONS AFTER GASTRIC BYPASS AND SLEEVE GASTRECTOMY; RESULTS OF A HOSPITAL-INDEPENDENT SWEDISH STUDY.

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Background: Readmission after bariatric surgery is caused by adverse events, obesity-related comorbidity or unrelated morbidity. We analyzed complete, validated data on readmissions.

Method: A database was created by cross-running the Scandinavian Obesity Surgery registry (coverage 98.5%) with several national registries (100%), such as the National Board of Health patient registry. Seven counties (70% of Sweden's population) participated. In-hospital care after index stay was analyzed for 2007 – 2013, either (1) irrespective of cause or (2) related to potentially avoidable adverse events (PAAE; predefined list of diagnoses/procedures). Time trends and differences between hospitals were calculated.

Results: In periods 1-30, 31-365 and 366-730 days, readmissions (any cause) consumed a mean 0.45, 1.23, and 1.57 days, of which 73%, 38% and 32% were due to PAAE. Readmission rates differed greatly between hospitals even after adjustment for case-mix, and were strongly associated with severe (Clavien-Dindo $\geq 3b$) 30 day complications.

The mean readmission days decreased during the time period, both for the first postoperative month and the first and second year. The PAAE-related readmission as a proportion was more stable over time.

Conclusion: Patients operated with gastric bypass or sleeve gastrectomy, especially if suffering from a severe complication during the first month, were readmitted to hospitals at a high degree during the first two postoperative years. During the time of observation the mean number of days consumed decreased which was interpreted as an indication of increasing quality of bariatric surgery in Sweden. The large difference between units, even when corrected for case-mix, allows for further improvements.

O.946 RISK OF SUICIDE, SELF-HARM AND DEPRESSION AFTER GASTRIC BYPASS

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Background: Bariatric surgery is an effective treatment for the severely obese; yet, concerns regarding severe adverse psychiatric outcomes have been raised.

Methods: During 2008-2012, a total of 22 539 subjects (75.3% women) underwent gastric bypass surgery in Sweden. We achieved complete follow-up using record linkage to nationwide registers. We used Cox proportional hazard models to calculate Hazard Ratios (HRs) of self-harm or hospitalization for depression, and standardized mortality ratio (SMR) for suicide.

Results: After adjustment for age, sex and calendar year of surgery, patients with a diagnosis of depression in the two years preceding gastric bypass surgery were at high risk of hospitalization for depression in the two years following the surgery. The adjusted HR was 52.3 (95% CI: 30.6-89.2). Likewise, for patients having a diagnosis of self-harm preceding surgery the HR for self-harm as a diagnosis/cause of death within two years post gastric bypass was 33.5 (95% CI: 23.7-47.4), compared to patients with no such diagnosis. The highest risk was found among those below the age of 25, compared to those 55 years and older, HR=5.4 (95% CI 2.6-11.4). The SMR for suicide (n=17) was increased among females, 4.50 (95% CI 2.50-7.50), while the SMR among males was 1.71 (95% CI 0.54-4.12).

Conclusions: The risk of depression, self-harm and suicide is high in patients having undergone gastric bypass surgery. The risk is largely attributable to those with prior psychiatric diagnoses. Increased awareness is needed to identify patients in need of additional psychiatric support after gastric bypass surgery.

O.947 WEIGHT LOSS PRIOR TO GASTRIC BYPASS AND POSTOPERATIVE WEIGHT DEVELOPMENT. DATA FROM THE SCANDINAVIAN OBESITY REGISTRY (SOREG)

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Background: Weight-reducing regimens prior to bariatric surgery is known to reduce risks of postoperative complications. Whether there is an association between preoperative weight loss and postoperative weight development over time is not known.

Methods: Prospectively registered pre- and postoperative weight change data from 9,570 patients undergoing primary gastric bypass in Sweden in 2008-2011 and with follow-up for ≥ 2 years were analyzed. Logistic regression with correction for confounders was used to estimate the relation between pre- and postoperative relative weight change.

Results: Total preoperative weight change in the 25th, 50th and 75th percentile for preoperative weight loss was 0, 4.5 and 8.6%, respectively. When comparing patients in the 50th percentile for preoperative weight loss with those in the 25th percentile, total postoperative weight loss was 5.0 and 5.3% higher at 1 and 2 years, respectively ($p < 0.001$). Corresponding values for patients in the 75th percentile for preoperative weight loss were 11.8 and 10.1% ($p < 0.001$).

The effect was even more pronounced for patients in the 75th percentile of preoperative BMI (BMI > 45.7). Thus, in this group of patients and within the 75th percentile for preoperative weight loss, total body weight reduction after 1 and 2 years was 15.2 and 13.6% higher, respectively, compared with patients in the 25th percentile for preoperative weight loss.

Conclusions: Weight loss prior to gastric bypass for morbid obesity is associated with sustained improved postoperative weight reduction. Moreover, there is a relationship between the degree of pre- and postoperative weight loss and the relation is stronger in patients with high BMI.

O.948

PREGNANCY & PERINATAL OUTCOMES AFTER BARIATRIC SURGERY

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Background: Large-scale studies of pregnancy and perinatal outcomes after bariatric surgery are scarce.

Methods: Using Swedish nationwide health registers and the Scandinavian Obesity Surgery Quality Register (SOReg), we identified women who had undergone bariatric surgery prior to pregnancy (Roos et al, BMJ 2013 [n=2562]); Johansson et al, NEJM 2015 [n=670]). For each post-surgery pregnancy, we identified up to 5 control pregnancies matched by maternal age, BMI (in early pregnancy [comparison 1]; pre-surgery [comparison 2]), smoking status, educational level, parity, and delivery year.

Results: When matched by early-pregnancy BMI, post-surgery births were more often preterm than in comparators (9.7% vs 6.1%; $P < 0.001$). This applied both to spontaneous and medically indicated preterm birth, but was modified by early-pregnancy BMI with increased risk only observed in women with BMI < 35. Bariatric surgery was also associated with higher risk of small-for-gestational-age [SGA] and lower risk of large-for-gestational-age [LGA] birth (both $P < 0.001$), while no differences were detected in stillbirth or neonatal death versus comparators. When matched by pre-surgery BMI, similar results were observed for SGA and LGA, and the length of gestation was also significantly shorter in post-surgery pregnancies. Women with a history of bariatric surgery had significantly lower risk of gestational diabetes vs comparators (1.9% vs 6.8%; $P < 0.001$), while no between-group difference was seen for major congenital malformations and a borderline increased risk for the combined outcome stillbirth and neonatal death ($P = 0.06$).

Conclusion: Bariatric surgery is associated with both positive and negative pregnancy and perinatal outcomes.

O.951

EFFECT OF ANTERIOR HIATOPLASTY WITH SLEEVE GASTRECTOMY ON REFLUX SYMPTOMS AND PPI INTAKE FOR ONE YEAR POST OPERATIVELY

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Backgrounds: Sleeve Gastrectomy (SG) is increasing worldwide as a standard procedure to treat morbid obese patients. Gastroesophageal reflux disease (GERD) with the presence of sliding hiatal hernia is a common incidence within these patients. The best surgical approach to treat the sliding hiatal hernia (SHH) is still disputed.

Objective: to assess the effect of anterior hiatoplasty with sleeve gastrectomy on obese patients with GERD regarding the post operative reflux symptoms and the need of proton pump inhibitors (PPI).

Methods: obese patients with gastroesophageal reflux disease and sliding hiatal hernia were randomized in two groups, Gr A had SG with anterior hiatoplasty and group B only SG.

Prospective data was collected regarding preop. and postop. reflux symptoms (FSSG scoring), excess weight loss, intake of PPI postop. for one year.

Results: between 2012 and 2014, 40 from 218 (18%) patients coming for SG, had GERD with SHH, Group A 20 and Group B 20 patients. Weight loss was similar in both groups. The need of PPI postoperatively was significantly shorter in Gr A (2-6 weeks) than Gr B (10-12 months), $p < 0,001$.

Conclusion: Anterior hiatoplasty with sleeve gastrectomy is sufficient to treat reflux symptoms and to decrease the need for PPI postoperatively

O.952

LAPAROSCOPIC SLEEVE GASTRECTOMY: LONG-TERM OUTCOMES ON WEIGHT LOSS, GERD AND DIABETES**Ariola Hasani**¹, Antonella Santonicola², Gabriella Nosso¹, Brunella Capaldo¹, Paola Iovino², Luigi Angrisani³¹ *Department of Clinical Medicine and Surgery, University of Naples Federico II, Naples, Italy*² *Department of Medicine and Surgery, University of Salerno, Salerno, Italy*³ *General and Endoscopic Surgery Unit, San Giovanni Bosco Hospital, Naples, Italy*

Background: Laparoscopic Sleeve Gastrectomy (LSG) is an effective and relatively safe bariatric procedure, but long-term results are still rare. Our aim was to evaluate the efficacy of LSG on weight loss, gastroesophageal reflux symptoms and Type 2 Diabetes.

Methods: Medical records of all 105 patients undergoing SG at our Institution between 2006 and 2009 were retrospectively examined. Long-term outcomes were analyzed in terms of BMI, %TWL, %EWL, comorbidities resolution and revisional surgery. According to the preoperative BMI, patients were divided in two groups: Group 1 (n=61) BMI<50kg/m² and Group 2 (n=44) BMI≥50Kg/m². We considered as surgical success the achievement of a BMI<35kg/m² for Group 1 and of a BMI<40kg/m² for group 2.

Results: Group 1 (72% female, mean age 39.9 years old) presented a mean preoperative BMI of 41.2±4.7kg/m² and Group 2 (52% female, mean age 38.5 years old) a BMI of 57.2±3.6kg/m². No difference was found in the preoperative prevalence of hypertension, dyslipidemia, T2DM, GERD symptoms between the two groups. The follow-up rate was 94.2% after 5 years (n=99). At 5th year, Group 1 showed a mean BMI 30.1±4.8kg/m², a %TWL of 26.6±10, and %EWL of 58.4±21.8. Group 2 had a mean BMI of 37.8±8.3kg/m², %TWL 33.4±12.9, %EWL 53.9±22.4. Surgical success was achieved in 85% of patients of Group 1 and 63% of patients of Group 2. Comorbidities improved considerably: resolution of hypertension was achieved in 64% of patients, of dyslipidemia in 69% of patients, resolution (complete or partial) of T2DM in 90% of patients. At 5 years of follow-up, diabetic patients showed a significantly lower weight loss when compared to non-diabetic patients (%EWL: 44±19, p=0.007 vs non-diabetic subjects). GERD symptoms improved in 73.3% of patients of Group 1 and in 44.4% of patients of Group 2, with a new onset of GERD in 15% of patients of Group 1 and 7.7% of patients of Group 2. Nine patients (9,1%) underwent revisional surgery for poor weight loss outcomes or severe GERD symptoms.

Conclusion: SG is an effective procedure in terms of weight loss outcomes and remission of comorbidities, more evident in patients with a preoperative BMI<50kg/m². Although a second procedure can be required for poor weight loss outcomes or persistence of GERD symptoms.

O.953**PORTO-MESENTERIC THROMBOSIS AFTER BARIATRIC SURGERY****Nimeri A.**, Khoursheed M, Alnaami M, Alhazmi A, Fawwal H, Alqahtani A, Abdalla E, Naqeeb A, Alami R, Safadi B, Alkuwwari M, Basha M, Sargsyan D, Abdelwahid A, Taha S, Ahmed F, Fayez R, Moghraby M, Al-Muntashery A, Haddad M, Bashir A*The Pan Arab Bariatric Surgery Research Group*

Background: The prevalence of Obesity & Type II Diabetes Mellitus (DM) is among the highest in the world. Bariatric surgery has been shown to be the most effective method to treat morbid obesity and type II DM compared to intensive medical therapy. However, bariatric surgery is not without complications. We herein examine the prevalence of porto-mesenteric thrombosis in the Middle East region represented by the Pan Arab Bariatric Surgery Group.

Method: We sent a questionnaire to the members of the Pan Arab Bariatric Surgery Group. This group represents surgeons from the following countries (UAE, KSA, Qatar, Bahrain, Oman, Kuwait, Egypt, Jordan and Lebanon). The questionnaires were sent by email, and reminders were sent through social media to the members of the group and in our monthly Tele-video conference meeting.

Results: We received back 17 questionnaires. The total members in our Pan Arab Bariatric Surgery Group are 77. The data represents 17 surgeons from 12 hospitals in 8 countries (UAE, KSA, Qatar, Kuwait, Egypt, Jordan, and Lebanon). We received no responses from Bahrain or Oman. The total number of cases performed was 11911 cases (LAGB 11.2%, 79% LSG, 25.6 % LRYGB, 2.9% SAGB, 1.6% LGCP). Our surgeon encountered 28 PMT cases (0.24%). The locations of these PMT were 50% mesenteric and the rest either portal or combined. History of travel was not found to be associated with PMT. PMT cases occurred after all procedures but most commonly after LSG (86%). Our practice of DVT prophylaxis is quite variable before and after surgery. However, most patients with PMT received anticoagulation for less than a week (1-6 days (Average 8.1 days, Mean 5 days, Mode was 3 days) and most of them were on only 40 mg of LMWH during their hospital stay). All patients with PMT were symptomatic with abdominal pain in the first 1-4 weeks after surgery. The diagnostic modality to detect PMT was CT in all but one case of PMT, which was diagnosed with US. Two patients required surgical resection of small bowel and all other patients responded to medical anticoagulation.

Conclusion: PMT is an uncommon complication after bariatric surgery. However, a high index of suspicion is important to detect this complication.

O.955**DELAYED GASTRIC EMPTYING AS A PROPOSED MECHANISM OF ACTION DURING INTRAGASTRIC BALLOON THERAPY: RESULTS OF A PROSPECTIVE CONTROLLED STUDY**

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Background: Gastric emptying (GE) in obese patients is reportedly accelerated, delayed with placement of an intragastric balloon (IGB), and thought to normalize upon IGB removal. A prospective study was performed in which GE in matched patients with and without IGB placement using standardized scintigraphy methods was compared.

Methods: Patients with placement of IGB and control groups were matched for age, gender, race and body mass index (BMI). IGB treatment was 6 months with removal after this time frame. GE measured at 1 and 2 hour time points was performed at screening, weeks 8, 16, 27 (after removal of IGB) and 39. Standardized normal values were obtained from consensus recommendations previously published by joint societal guidelines.

Results: There were 15 IGB and 14 control patients, mean age 38.2 ± 8.62 years, 89.7% (N=26) women, 72.4% (N=21) Caucasian. Baseline mean weight (lbs) and BMI of the cohort were 219.3 ± 32.34 and 35.2 ± 3.13 , respectively. GE at screening was comparable between the IGB and control groups (1 hour mean GE values $38.5\% \pm 17.63$ vs $34.8\% \pm 14.07$; 2 hour mean GE values $74.6\% \pm 16.60$ vs $74.7\% \pm 14.58$; both $P > 0.05$). However, GE in the IGB group was significantly delayed and at the lower limits of normal compared to the control group at weeks 8 and 16 (Week 8: 1 hour mean GE values $18.8\% \pm 15.84$ vs $32.6\% \pm 16.01$; 2 hour mean GE values $38.5\% \pm 22.19$ vs $74.3\% \pm 18.10$. Week 16: 1 hour mean GE values $18.0\% \pm 13.15$ vs $43.6\% \pm 13.97$; 2 hour mean GE values $41.3\% \pm 19.92$ vs $81.3\% \pm 15.64$; all $P < 0.05$). After IGB extraction GE returned to comparable values between both groups (Week 27: 1 hour mean GE values $36.0\% \pm 17.23$ vs $35.3\% \pm 19.73$; 2 hour mean GE values $68.1\% \pm 17.78$ vs $73.6\% \pm 19.60$. Week 39: 1 hour mean GE values $39.2\% \pm 19.38$ vs $41.0\% \pm 17.30$; 2 hour mean GE values $75.6\% \pm 16.13$ vs $74.9\% \pm 17.64$; all $P > 0.05$).

Conclusions: In obese patients undergoing IGB placement, GE becomes delayed during IGB therapy and after removal normalizes to values similar to control patients.

VIDEO PRESENTATIONS

V.007 LAPAROSCOPIC GASTRIC BYPASS AFTER NISSEN FUNDOPLICATION: DISSECTION AND FORMATION OF THE GASTRIC POUCH

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Introduction: Nissen fundoplication is considered the standard surgical treatment of GERD, which, in normal weight individuals, is 93% effective in controlling reflux symptoms. In contrast, morbidly obese patients are four times more likely to experience a failed fundoplication than normal weight patients.

Clinical Case: We present a case of a 42-year-old woman with a background history of poorly controlled type II diabetes mellitus, & Gastro-esophageal reflux disease underwent laparoscopic Nissen fundoplication surgery four years ago. Her BMI was 44 despite multiple diet attempts. She continued on antireflux medications after fundoplication surgery because of the recurrence of GERD symptoms. An upper GI endoscopy revealed grade B GERD. A decision was therefore made to undergo laparoscopic RYGB surgery in this patient. Upon follow-up after 6 months, the patient had 30% EBW loss with uneventful postoperative recovery.

Conclusions: The decision to perform a gastric bypass surgery after fundoplication surgery in obese patients should be considered as one of the options of antireflux surgeries that the patient can benefit from, along with the advantages of weight loss. Such a decision is challenging, especially in a patient who have a recurrent GERD symptoms after the fundoplication surgery, since the operation will have high technical demands to take down the adhesions around the stomach and release the fundoplication valve before the gastric pouch formation.

V.031 GASTRIC PPLICATION TO SLEEVE GASTRECTOMY - REVISIONAL SURGERY (video)

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The gastric plication a new restrictive bariatric surgery was performed in Hospital del Salvador, Chile as an experimental model during 2011-2013. We present a case report of one patient who develops chronic stomach pain.

39 years old female patient, BMI 37,9 and insulin resistance syndrome. Surgery was performed in January 10, 2011. She develops chronic stomach pain during feeding and anemia. After 2years follow up and BMI 26,7, she develops unfold of the fundus of the gastric plication and more pain during feeding. She regains weight (BMI 30,5) and we decide to perform a Sleeve gastrectomy as Revisional Procedure. Technique: Patient in a French position with a 5 trocar technique. Adhesiolysis of gastric plication. 40% of fundus unfold. Undo of great curvature plication. With a 32F Bujie we perform a sleeve gastrectomy with 3 green and 2 blue linear stapler (60mm), 3/0 pds reinforcement suture. A 2hrs procedure with out complications with a negative methylene-blue test. 3 days of hospitalization without pain during feeding. She didn't develops complications during her follow up. Sleeve Gastrectomy as a Revisional procedure is feasible after a Gastric Plication complications.

V.038 LAPAROSCOPIC SLEEVE GASTRECTOMY IN A PATIENT WITH SITUS INVERSUS TOTALIS

Digvijay Bedi

Hope Obesity Centre

Situs inversus totalis is a congenital anomaly present in approximately 0.01% of population. In this anomaly there is complete mirror image reversal of all the abdominal and thoracic organs.

Presenting a case of 45 year old male with situs inversus totalis. His BMI was 42 and had co-morbidities like hypertension and dyslipidemia. He was posted for laparoscopic sleeve gastrectomy after the complete work up.

Methods: Patient was placed in supine position and ports were placed according to the need of the condition that patient had. Standard sleeve gastrectomy was performed using 36F gastric calibration tube.

Result: Post operative course of the patient was uneventful and the patient was discharged on the second postoperative day with dietary advice.

Conclusion: Laparoscopic sleeve gastrectomy can be performed safely in a patient with situs inversus totalis by experienced laparoscopic surgeon.

V.046**INSTRUCTIONAL VIDEO FOR THE LAPAROSCOPIC BILIOPANCREATIC DIVERSION/DUODENAL SWITCH****Fernando B. Bonanni***Abington memorial Hospital, Abington, Pennsylvania*

The epidemic of obesity is now upon us as being the major nutritional problem in the world surpassing starvation ⁽¹⁾. The role of metabolic medicine and surgery will continue to be challenged with the task of reducing weight and the related co-morbid diseases. The added burden of cost containment begs for the treatment option that results in sustained success, minimal recidivism, with the least in complications, and the least likely to need revision. It is without question that the Biliopancreatic Diversion/Duodenal Switch (BPD/DS) is the only procedure in our armamentarium available that fits the bill for some patients.

Unfortunately, the challenges of adding this to the bariatric surgeon's tools are seemingly insurmountable. These perceptions are motivated by an inherent prejudice from the past, a lack of understanding the procedure and its benefits, and a refusal to accept the recidivism, and other consequences of previously accepted gold standards.

Conclusions: After the experience of a challenging learning curve, teaching educational programs, and multiple proctoring experiences, it is this author's opinion that this procedure and the infrastructure it requires can be accomplished for any bariatric surgeon or program. This video demonstrates the BPD/DS done in 5 stages. 1. Mobilization of the Stomach and dissection of duodenum. 2. Creation of an entero-enterostomy. 3. Vertical Sleeve Gastrectomy 4. Division and mobilization of the duodenum 5. Duodeno-ileostomy anastomosis.

V.048**LAPAROSCOPIC GASTRIC BYPASS PROCEDURE AND REPAIR OF A LARGE SLIDING HIATAL HERNIA: A VIDEO PRESENTATION.****Mohammad Al-Kuwar**¹, Gaby Jabbour¹, Billy Helmuth^{1,2}¹ *Hamad General Hospital, Doha, Qatar.*² *St. John's Pleasant Valley Hospital, Camarillo, USA.*

Background: Morbid obesity is a major health problem in Qatar, affecting all age groups. It has resulted in a shorter life expectancy and decreased quality of life. Bariatric surgery results in long-term weight loss, and treats obesity related co-morbidities (diabetes, hypertension, reflux disease ...)

Methods: This video presents a laparoscopic gastric bypass procedure and repair of a large sliding hiatal hernia in a 27 year old morbidly obese (BMI: 37), male patient, complaining of GERD for > 5 years, refractory to medical treatment. Barium studies and upper endoscopy showed a large sliding hiatal hernia extending from 38 to 32 cm.

Results: Post operatively, the patient's quality of life improved dramatically and he stopped his use of proton pump inhibitors.

Conclusion: Bariatric surgery results in long-term weight loss, and treats gastro-esophageal reflux due to hiatal hernia (if refractory to medications).

V.060**TOTAL GASTRECTOMY AND ROUX-EN-Y ESOPHAGOJEJUNOSTOMY AS DEFINITIVE TREATMENT FOR RECURRENT CHRONIC GASTROCUTANEOUS FISTULA NEAR THE GEJ AFTER SLEEVE GASTRECTOMY****Natalya Zhang**¹, John Hagen¹, Lazar Klein¹¹ *Humber River Regional Hospital, University of Toronto, Toronto, Canada*

Background: Staple line leaks are one of the most common and most feared complications after laparoscopic sleeve gastrectomy. They happen in 0.5-7% of cases and a small percentage progress to form chronic fistulas. The etiology for these leaks, which often occur close to the gastroesophageal junction, are not well understood. Treatment involves multiple modalities including nonoperative supportive care with nutrition and drains, endoscopic management with APC, clips or stents, and surgical management. No comparison or long-term data is yet available. Multiple centers are employing Roux limb anastomosis to the fistula as surgical treatment for these complex cases. On the other hand, there have been recent reports of total gastrectomy and esophagojejunostomy as definitive treatment for these chronic fistulas.

Methods: This video presents the case of a 44 yo woman who developed a leak from the staple line near the GEJ after sleeve gastrectomy. This developed into a chronic fistula to the skin. Despite multiple attempts at endoscopic treatment including APC, Botox injection of pylorus and over the scope clipping systems with initial success, the fistula continued to recur. Definitive management was provided 9 months later in the form of a total gastrectomy with Roux-en-Y esophagojejunostomy.

Results: The patient had an uncomplicated two-day postoperative hospital stay and has had no recurrence since.

Conclusion: The preferred definitive treatment for difficult chronic gastrocutaneous fistulas after sleeve gastrectomy is a total gastrectomy with Roux-en-y esophagojejunostomy.

V.076 MIRROR IMAGE APPROACH OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS WITH SITUS INVERSUS TOTALIS

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Background: Situs inversus totalis is a rare (fewer than 1/8000) autosomal recessive congenital defect characterized by the transposition of abdominal and/or thoracic organs. Surgical procedures involving these patients are technically more complicated due to the mirror-image anatomy. A total of five previous cases have been reported in patients with situs inversus totalis undergoing laparoscopic bariatric surgery. Our objective is to report and demonstrate a Roux-en-Y gastric bypass in a woman with situs inversus totalis.

Methods: We performed a successful laparoscopic Roux-en-Y gastric bypass on a patient with situs inversus totalis, hypertension, diabetes mellitus and a BMI of 45. The operation was conducted using a mirror image approach of the surgeon's normal technique. Key technical aspects of the operation will be shown in the video.

Results: There were no major complications during the procedure. The total duration of the operation was 95 minutes. The patient had an unremarkable recovery. Her BMI three months postoperatively was 35. At three months she had resolution of her type 2 diabetes and hypertension.

Conclusion: Laparoscopic Roux-en-Y gastric bypass is possible in cases of situs inversus totalis. The use of mirror image technique is critical. This surgeon's normal routine involves operating from both sides of the table. Ambidexterity helped to reduce the complexity of the procedure.

V.079 LAPAROSCOPIC GASTRIC PLICATION AFTER REMOVAL OF FAILED BAND IS A ONE STEP PROCEDURE

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¹ *American University of Beirut Medical Center, Beirut-Lebanon*

Background: Laparoscopic Gastric Plication as one step procedure

Methods: Laparoscopic gastric band was the first common procedure in Europe for the treatment of Morbid Obesity but the failure of this procedure with its complication can reach up to 40%. Shifting to laparoscopic sleeve gastrectomy as one step procedure associated with increase in the leak rate.

Results: I report my experience failure of 20 band removal and gastric plication as a one step procedure to treat failure of band with no complication and excellent weight loss.

Conclusions: Laparoscopic Gastric Plication is a safe procedure to treat failed gastric band as a one step procedure

V.084 LAPAROSCOPIC TREATMENT OF SLEEVE LEAK WITH ROUX-EN-Y GASTRIC BYPASS

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Background: Leak is one of the common complications of Laparoscopic Sleeve Gastrectomy that entail prolongation of Hospital stay, morbidity and even mortality.

Methods: We report the treatment of 11 cases of complicated leak post sleeve gastrectomy that failed all conservative measure to heal including stenting by Laparoscopic Roux En Y Gastric Bypass all were cured except one mortality due to sepsis.

Results: The video will show the steps used to dissect the Gastroesophageal are identifying the leak and Roux En Y Gastric Bypass.

Conclusions: Sleeve Gastrectomy level can be handled by minimal invasive surgery in advanced centers in Bariatric surgery.

V.085
TREATMENT OF DELAYED GASTRIC BYPASS BLEEDING BY COMBINED ENDOSCOPIC & LAPAROSCOPIC APPROACH

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Background: Laparoscopic Gastric Bypass complications are well-known including leak, early postoperative bleeding, jejeunojejunal hernia, jejeunojejunal stenosis, and Peterson defect hernia.

Methods: We will present delayed Gastric bleeding 6 weeks post surgery referred from other hospital after transfusion with 6 units of PC due to erosion of left Gastric artery into the suture line.

Results: The video will show the steps used by endoscopy to localize the bleeding site and laparoscopic approach to control the bleeding, and redo the anastomosis site.

Conclusion: Treatment of Gastric Bypass complication is feasible by minimal invasive surgery in advanced center in Bariatric Procedures.

V.097
SLEEVE GASTRECTOMY IN A PATIENT WITH BAND REMOVAL DUE TO EROSION

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Introduction: A 60 year old female with BMI of 38.8kg/m² with diabetes, hypertension and sleep apnea. She had gastric banding procedure in 2009, which was removed in 2011 due to infection and erosion of the band. She has regained weight and re-developed multiple comorbidities after the band removal.

Materials and Methods: Extensive lysis of adhesions was performed. The liver and the antrum of the stomach were adhered to each other as one piece and a lot of adhesions were noted anterior to the liver as well. Dense adhesions were noted between the left lobe of the liver, stomach fundus and the spleen. Careful dissection was carried along the greater curvature of the stomach up to the gastroesophageal junction. After advancing the 40 bougie, the stomach was transected along the bougie with a linear stapler creating a sleeve. The staple line was oversewed with a 2-0 Polysorb suture and tested with air.

Result: Patient was admitted to the bariatric floor postoperatively and progressed well. An upper GI bypass protocol with water-soluble contrast was performed on POD 1 with no leak identified and good passage of contrast into the intestines. The patient was then discharged home on a phase 1 bariatric diet on POD 1.

Conclusion: Sleeve gastrectomy after the removal of an eroded band may be technically challenging due to adhesions and physiologic changes in the stomach.

V.098
LAPAROSCOPIC REMOVAL OF ADJUSTABLE GASTRIC BAND AND COMPONENTS WITH ENTEROCUTANEOUS FISTULA TAKEDOWN AND SMALL BOWEL RESECTION

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Introduction: A 62 y/o female (BMI 32.7 kg/m²) with history of adjustable gastric band performed 9 years ago. Patient presented after noting the port completely eroded through the skin causing local pain and drainage. A computed tomography scan showed the band tubing to have eroded through a portion of the small bowel. An upper endoscopy showed a small hiatal hernia and no evidence of gastric erosion.

Materials and Methods: We dissected the small bowel fistula from the abdominal wall confirming the intra-enteric position of the band tubing. Adhesions between the liver and gastric band were taken down, and the band was identified. The band buckle was transected and the entire band removed. We then took down the gastric wrap with a combination of sharp dissection and two firings of a linear stapler. Air leak test performed which was negative. A window was made in the mesentery of the previously fistulized small

bowel which was then resected. A side-to-side functional end stapled anastomosis was performed and the mesenteric defect sutured closed. We then excised the skin edges from the eroded port and closed the fascial defect with a PDS suture. The port site wound was left open to heal by secondary intention.

Result: An UGI was performed and was negative for any leak or obstruction. Patient did well and was discharged home POD 4.

Conclusion: Late complications of gastric banding are not always limited to the stomach/band interface and can include any portion of the band components including the port and tubing.

V.099 LAPAROSCOPIC CONVERSION OF DUODENAL SWITCH TO ROUX-EN-Y GASTRIC BYPASS FOR CHRONIC DIARRHEA AND MALNUTRITION

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Introduction: A 44 year-old female with BMI 77 kg/m², status post laparoscopic duodenal switch with persistent diarrhea and malnutrition for 9 months after surgery. Patient was converted to laparoscopic RYGB.

Materials and Methods: The liver was adhered to the duodenal switch anastomosis. Adhesions were taken down and the ileum was then transected from the stomach. The ileum was noted to be thickened at the site of the transection, this portion was resected and an end-to-end ileo-ileostomy was performed using a linear stapler. The stomach sleeve was then dissected free from the left lobe of the liver where adhesions had formed. The stomach sleeve was then transected from the pylorus using a linear stapler. The ligament of Treitz was then identified and a 40 cm Roux limb was created using a linear stapler. The jejunojejunostomy was then created between the afferent and efferent limbs with a 75 cm common channel. The Roux limb was then anastomosed to the stomach pouch in an antecolic hand sewn anastomosis. An EGD was then performed to evaluate the anastomosis. No air leak was appreciated.

Result: Patient did well postoperatively, UGI was negative on POD# 3, home on POD # 5 on phase 1 diet.

Conclusion: Duodenal switch is a safe and effective procedure of choice for class III morbid obesity. However, it is not without its complications, including chronic diarrhea and malnutrition. Roux-en-Y gastric bypass remains a safe and effective treatment option for conversion of DS for patients who fail due to these complications.

V.100 CONVERSION OF ADJUSTABLE GASTRIC BAND TO LAPAROSCOPIC SINGLE-ANASTOMOSIS DUODENAL SWITCH FOR WEIGHT REGAIN AND DYSPHAGIA

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Introduction: A 32 year-old female (BMI 57.9 kg/m²) with history of laparoscopic adjustable gastric band(AGB) placement in 2011 presented with weight regain and dysphagia.

Materials and Methods: Adhesions were taken down and the band was removed. The tunnel was then followed posteriorly and the plicated gastric fundus was separated from the distal portion of the stomach. The gastrohepatic ligament was then taken down and the right crus exposed. The dissection was carried anteriorly, then posteriorly behind the esophagus until the hiatus was visualized, which was then closed using a figure-of-eight non-absorbable suture. The greater curvature was then mobilized from 5 cm proximal to the pylorus superiorly to the angle of His. A sleeve was created using the linear stapler around a 34-french tube. The staple line was oversewn. The first portion of the duodenum was then mobilized and transected with a linear stapler approximately 3 cm distal to the pylorus. The distal duodenal stump was oversewn. A loop of small bowel was selected approximately 250 cm from the ileocecal valve and anastomosed to the proximal duodenum with a 2-layer hand sewn technique. The anastomosis and sleeve were then both tested with air and methylene blue and found to be patent and free of leaks.

Result: The upper gastrointestinal study was passed and phase 1 diet started on postoperative day(POD) 2. The patient was discharged home on POD 3.

Conclusion: Conversion procedures for failed or complicated AGB patients continues to increase. The laparoscopic single-anastomosis duodenal switch is a feasible option in this patient population.

V.113 COMMON BILE DUCT STONE MANAGEMENT, AFTER LRYGBP

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Azienda Ospedaliera Desenzano

Background: The weight loss following Roux-en-Y Gastric Bypass can increase the incidence of cholelithiasis development. Yet, simultaneous asymptomatic cholecystectomy at the time of bariatric surgery is controversial. Nevertheless, in case of common bile duct (CBD) stones, the difficulty to reach endoscopically the biliary tract after RYGBP should be considered.

Methods: We here report the case of a patient who presented with CBD stones four years after gastric banding, converted in RYGBP three years later. The US and TC investigations were negative and only Cholangio RMN was helpful to demonstrate the choledocolithiasis. Our approach of transgastric laparoscopic assisted endoscopic retrograde cholangiopancreatography followed by sphincterotomy and balloon stones extraction is illustrated.

Results: The procedure lasted 98 min. Liver function tests returned to normal on postoperative day 2, and the patient was discharged on postoperative day 4. After 9 months, the patient was well and asymptomatic.

Conclusions: Patients previously submitted to RYGBP and presenting choledocholithiasis, in referral centers, can benefit from a sphincterotomy and stones extraction, reaching the Vater's papilla through the gastric remnant.

V.148

LAPAROSCOPIC SLEEVE GASTRECTOMY WITH DUODENOJEJUNAL BYPASS; HOW I DO IT?

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The combination of 'Laparoscopic sleeve gastrectomy (LSG)' and 'Duodenojejunal bypass(DJB)' is introduced as an ideal procedure to improve surgical outcomes such as weight loss and resolution of obesity-related comorbidity. In the series of bariatric surgeries, Roux-en-Y gastric bypass has some problems regarding dumping syndrome and marginal ulcer, while sleeve gastrectomy also has some obstacles for inadequate weight loss and relatively low cure rate of diabetes. Hence, laparoscopic sleeve gastrectomy with duodenojejunal bypass could be an alternative to the other procedures because of its feasibility and effectiveness, although this procedure still has important problems for technical difficulty to perform. Based on this background, we herein present our experience of LSG plus DJB in 2 patients with morbid obesity and diabetes.

Short summary for surgical procedure as follows; the patient was placed in the supine position with six ports. After that, sleeve gastrectomy was achieved via a series of steps. In the first step, the initial stapling was done at the point of approximately 4cm apart from pyloric ring. And then, the other stapling lines were created with parallel to the lesser curvature of the stomach under 34-Fr bougie dilator guidance. After mobilization of first part (distal 3cm from pylorus) of the duodenum with preservation of right gastric & gastroepiploic artery, duodenum was transected. Duodeno-jejunal anastomosis was performed by hand-sewn manner. Finally, Peterson's defect was closed by running suture using a non-absorbable material.

V.199

LAPAROSCOPIC REVISION OF GASTRIC REMNANT LEAK FOLLOWING MINI/ONE ANASTOMOSIS GASTRIC BYPASS (MGB/OAGB)

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Background: This is the clinical case of a 22 y.o. woman presenting with a number of early postoperative complications following a Mini/One anastomosis gastric bypass (MGB/OAGB).

Methods: As shown in the video, the laparoscopic revision of the surgical procedure is carried out. A thorough exploration of the abdominal cavity is performed, the leak source is detected and an enlarged resection of the gastric fundus is made.

Results: The patient was discharged in good conditions from hospital on postoperative day eight (POD 8) following the revisional procedure.

Conclusions: Following any gastric bypass procedure, in the suspicion of a leak, both the gastro-jejunal anastomosis of the alimentary tract and the excluded stomach with the biliary limb, must be carefully checked. Early swallow contrast CT scan may provide false negative results for leak especially when originating from the excluded stomach.

V.322

STAPLER MISFIRES DURING BARIATRIC SURGERY AND MANAGEMENT

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Background: The development of laparoscopic linear staplers enabled minimally invasive approaches to bariatric surgery. Mechanical staplers ease the task of transecting and re-anastomosing tissue, but they are not free from the failure.

Methods: We present 2 laparoscopic sleeve gastrectomy and 1 laparoscopic Roux and Y gastrectomy cases with stapler misfires and their managements in this video. In first case, linear blue cartridge misfired and did not cut properly, the misfired staplers can be easily seen both sides of resected stomach. A new purple one fired and cut previous stapler line successfully. In the second case, a linear blue cartridge failed to cut upper portion of the stapler line during laparoscopic Roux and Y gastrectomy. A new stapler is introduced and fired. Transection and anastomosis are completed successfully. Finally, last video is the most serious one. The blue cartridge did not fire the staplers and cut, and severely crushed the stomach and caused the bleeding. After the second firing, a gastric wall defect is found in the remnant stomach. The defect closed with using 2/0 V-loc suture.

Results: No leak was seen after postoperative period in those three patients.

Conclusions: The misfired staplers which they are the major accidents were noticed during the operation. So, all stapler lines should always be checked meticulously, a tiny misfired stapler can be overlooked during the operation. Staple line failures and related anastomotic leaks are a principal etiology of patient morbidity and mortality after bariatric surgery.

V.326 LAPAROSCOPIC SEROMYOTOMY FOR LONG STENOSIS AFTER SLEEVE GASTRECTOMY AT THE POSITION OF A FORMER GASTRIC BAND

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Background: A 42 years/ old female patient with a bariatric history of lap banding (and removal) underwent laparoscopic sleeve gastrectomy (LSG) for renewed weight gain (BMI 40kg/m²). Postoperatively an upper gastro-intestinal contrast study revealed long stenosis at the position of the former gastric band. We analyzed different options for dealing with this kind of complication.

Methods: Review of literature (PubMed) was performed using a combination of following Mesh-terms (“Gastrectomy”, “Constriction, Pathologic”). 9 eligible articles were taken into account

Results: Two specific parts of the stomach are prone to stenosis after LSG: the gastro-esophageal junction (especially in the case of a hiatal hernia) and the incisura angularis. Choice of therapy should focus on the length and position of the stenosis using upper gastro-intestinal contrast study and/or endoscopy. Endoscopic treatment (balloon dilatation/stent placement) is excellent particularly in case of a proximal short stenosis. Laparoscopic seromyotomy is suggested as an alternative method for long distal stenosis, but is rather unpopular due to high rate of complications (leakage, bleeding). Only in the case of a persistent stricture after seromyotomy and endoscopic therapy, a conversion to (open) RYGB with gastro-enterostomy above the level of stricture should be performed for it implies dealing with extensive gastric adhesions in a “frozen” upper abdomen.

Conclusions: Endoscopic therapy should be the treatment of choice. In case of a long distal stenosis, laparoscopic seromyotomy is a valuable alternative but complications are not infrequently reported.

V.371 LAPAROSCOPIC CONVERSION OF SRVG TO LSG, FOLLOWED BY CONVERSION TO LRYGB.

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Background: Revisional bariatric surgery becomes more common as the volume of operated bariatric patients rises. Revisional bariatric surgery is known to be technically challenging, and most of the literature reveals a higher complication rate compared to primary surgery.

Methods: This video presents a patient that underwent silastic ring vertical gastroplasty (SRVG) in the year 1995. In 2009 he underwent laparoscopic conversion to sleeve gastrectomy (LSG), and a second conversion to laparoscopic roux en y gastric bypass (LRYGB) in 2015.

Conclusions: Second laparoscopic revisional surgery may be feasible and safe, when performed by a well trained and experienced bariatric team.

V.382 LAPAROSCOPIC INTERPOSITION OF JEJUNUM AS SURGICAL SALVAGE IN UNDOING A ROUX-EN-Y GASTRIC BYPASS

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Background: In this case, we report on a young female patient complaining of unbearable dumping, hypoglycemia, and diarrhoe, one year after a laparoscopic Roux-en-Y gastric bypass. The result in terms of excessive weight loss is good. Nonetheless, undoing the gastric bypass is the only solution in this patient with poor quality of life.

Methods: In the video, we describe the surgical strategy for undoing the Roux-en-Y gastric bypass in this challenging case. The patient underwent a gastric banding in 2000, a removal of the gastric band in 2012, a conversion to gastric bypass in 2013, and revision of the gastrojejunal anastomosis due to stenosis in 2013. A laparoscopic interposition of a short segment of jejunum was necessary to connect the short gastric pouch to the formerly excluded stomach.

Results: Intermediate follow-up (6 months) shows a good functional outcome in the patient with a relieve of the complaints of dumping.

Conclusions: Using a jejunal interposition as surgical salvage in undoing a Roux-en-Y gastric bypass to connect a short gastric pouch to the remnant stomach, is safe and feasible, with good functional outcome. This procedure can open perspectives in difficult revisional cases.

V.445 GASTRIC PLICATION: STANDARD STEPS

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Introduction: Gastric plication is a new restrictive procedure. Until now, there is no standard technique. The author describes the different steps in this video to perform a gastric plication making it a standard technique.

Materials:

- Step1: Is the complete gastric liberation
- Step2: Is the calibration of the stomach over a 36 french tube.
- Step3: Is the folding and suturing of the plicated stomach, by a first row of separated non absorbable sutures that are 1.5 cm distant from each other.
- Step 4: Is to perform the second row of sutures by a non absorbable continuous suturing.
- Step 5: Is to perform the patent and leak test.

Conclusion:

This video shows these different steps making the gastric plication standard, reproducible and easy to perform.

V.450 LAPAROSCOPIC EMERGENCY SPLENECTOMY FOR SPLENIC RUPTURE AFTER REVISIONAL SURGERY OF GASTRIC BYPASS

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Background: Revisional surgery after bariatric surgery is not exempt from complications, which can present in 5-15% of the patients. Splenic rupture is an uncommon complication and can be associated to an unidentified splenic injury or less commonly to portal vein thrombosis (PVT).

Methods: We present the case 57-year-old woman who underwent laparoscopic Roux-en-Y gastric bypass 5 years ago, and presented a gastrogastric fistula (GGF) causing weight regain. She underwent surgery where the GGF was excised and the roux limb was lengthened to 150 cm. On the third postoperative day, the patient presented sudden onset of left shoulder tip pain with a drop in her haemoglobin levels. The CT showed perisplenic hematoma.

Results: A laparoscopy was performed and a ruptured spleen was observed with 3 liters of hemoperitoneum and active bleeding. The gastrosplenic ligament was opened and the splenic pedicle was stapled off. A splenectomy was performed afterwards.

Conclusions: Splenic rupture is a serious but uncommon complication after bariatric surgery that can present even weeks after surgery. A splenectomy is usually mandatory.

V.485

REPAIR OF A 32F BUJIE CAUGHT IN STAPLER LINE DURING A SLEEVE GASTRECTOMY (VIDEO)

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A case report: 31 year old female patient, BMI 42.3, insulin resistance, hyperuricemia, fatty liver, glucose intolerance. We decided to perform sleeve gastrectomy. Usual 5 trocars technique. During the performance of the procedure in the first fired we felt a resistance overcomes the stapler. Revision of the line and continue with the procedure. At the end of the procedure, we can't remove the bujie, that is caught in the stapler line.

Cutting the gastric tissue and release of the bujie, leaving a large opening. We decided to perform handsewn horizontal suture to prevent stenosis. 3/0 PDS Suture line reinforcement on mechanical suture. Negative methylene blue test. 5 days of hospitalization with no complications. 1 year follow-up with good weight loss and without stenosis.

V.497

LAPAROSCOPIC PROXIMAL GASTRECTOMY WITH ESOPHAGO-JEJUNAL RECONSTRUCTION FOR CHRONIC GASTRO-CUTAENOUS FISTULA AFTER SLEEVE GASTRECTOMY

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Introduction: Sleeve gastrectomy is now the most common bariatric procedure performed in the USA. Several studies support the safety, effectiveness and durability of the procedure. Nevertheless, leak rates have been reported from 0.5 to 3%. Chronic fistulas are rare but can be life threatening complications with unclear options for management.

Methods: We present a case of a 25 year old, morbidly obese (BMI 42.9) female. She underwent laparoscopic sleeve gastrectomy ten months before presentation outside of the US. Ten days after surgery she developed a gastric leak requiring exploratory laparotomy, washout, drainage and a feeding jejunostomy. Few weeks after this second surgery, she developed a chronic gastro-cutaneous fistula. The patient was referred to our clinic by her primary surgeon for further assessment and management.

A laparoscopic proximal gastrectomy with combined side-to-side linear stapler, hand-sewn esophago-jejunostomy and Roux-en-Y reconstruction was performed.

Results: The post-operative course was unremarkable. On post-operative day four she had an upper GI series that showed good passage of contrast and no leak. Clear liquid diet was started and later advanced to full liquid diet before discharge. On follow up, drain was removed and the patient was advance to regular diet.

Conclusion: Recent bariatric literature and the present case confirm that proximal gastrectomy with esophago-jejunostomy reconstruction is a safe and effective approach for chronic staple-line disruptions after laparoscopic sleeve gastrectomy.

V.499

LAPAROSCOPIC SUBTOTAL GASTRECTOMY AND ROUX EN-Y RECONSTRUCTION FOR GASTRIC OUTLET OBSTRUCTION FOLLOWING VERTICAL GASTROPLASTY

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Background: As many as 54% of patients with vertical banded gastroplasty (VBG) require revision surgery, either for symptoms to gastric outlet obstruction or for weight regain. We present the case of a laparoscopic conversion from VBG to Roux-en Y bypass with remnant gastrectomy.

Methods: A 49 year old female with history of VBG 21 years ago presented with severe dysphagia. Her BMI is 42.4. The EGD shows 2 areas of significant stricture and esophagitis. Using a standard laparoscopic approach, the proximal stomach and midportion are completely divided and resected. Reconstruction was made with a Roux-en-Y limb measuring 50 cm biliopancreatic limb, 100 cm alimentary limb, and a distal common channel.

Result: The recovery was uneventful. The patient was discharged 3 days after surgery. UGI gastrografin study ruled out any obstruction/leak. The dysphagia was relieved and she tolerated clear liquid diets.

Conclusions: Revisionary surgery is the best solution for patients who have experienced a first bariatric restrictive procedure with poor results or with complications. The aim of a revisionary procedure is to treat complications and to achieve further weight loss in patients with unsuccessful weight reduction or with weight regain. The RYGB is generally accepted as the gold standard surgical weight loss procedure with excellent results both in terms of weight loss and quality of life.

V.503

CONVERSION OF MINI- TO ROUX-EN-Y GASTRIC BYPASS FOR BILE REFLUX GASTRITIS

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Introduction: The efficacy and safety evaluation of the mini-gastric bypass procedure is ongoing as an alternative to Roux-en-Y gastric bypass for weight reduction and/or control of diabetes mellitus. From an anatomical standpoint, bile reflux gastritis remains a concern, particularly when angulation is insufficient at the gastro-jejunostomy in preventing bile reflux.

Methods: A 62 year old female, BMI 34 kg/m², presented with dysphagia. She underwent a mini-gastric bypass procedure 15 years prior that was complicated by a leak and repaired by laparotomy. Esophagogastroduodenoscopy revealed gastritis in the pylorus secondary to bile acids reflux. The biliopancreatic limb was measured approximately 320 cm. The gastrojejunal anastomotic site was then divided with a linear stapler with attention to the patency and width of the jejunojejunal area. The pouch was trimmed below the entrance of the left gastric artery. The Roux limb was created approximately 50 cm distal to the ligament of Treitz in an antecolic fashion. One hundred centimeters from the gastrojejunostomy, a side-to-side jejunojejunostomy between the biliopancreatic and alimentary limbs was performed.

Results: Upper gastrointestinal series demonstrated negative leak, fistula, and obstruction. On 6 weeks follow up, the dysphagia significantly improved.

Conclusions: Conversion of a mini- to Roux-en-Y gastric bypass is achievable in the management of bile reflux. Untreated bile reflux gastritis may lead to severe ulceration of the gastric pouch and esophagus, which can be difficult to treat increasing the risk of cancer.

V.545

CONVERSION OF NISSEN FUNDOPLICATION TO LAPAROSCOPIC GASTRIC BY-PASS: VIDEO CASE REPORT

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Background: Gastro-esophageal reflux disease (GERD) is a common disease, especially in developed countries. Prior to the routine use of bariatric surgery, fundoplication was considered the treatment of choice for GERD showing dependence on or resistance to proton pump inhibitors. Gastric bypass (LRYGB) is the most effective surgical treatment for morbid obese patients suffering from GERD. However, in case of prior fundoplication, such a procedure would be challenging.

Methods: We present the case of a 56 year old woman (127 kg, 1.67 m) with a body mass index of 45.5 kg/m². She was referred to our tertiary care center for morbid obesity. She had undergone both a cholecystectomy for acute cholecystitis and a Nissen fundoplication for GERD 20 years ago. Both procedures were performed under open approach. We report a step by step laparoscopic conversion of previous Nissen fundoplication to LRYGB.

Conclusion: LRYGB is the procedure of choice for the conversion of a previous fundoplication in patients needing bariatric surgery. Special attention must be paid when removing the wrap to limit per and post-operative complications.

V.556

LAPAROSCOPIC TOTAL GASTRECTOMY (LTG) TO TREAT A RECURRENCE OF A GASTRIC FISTULA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG)

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Background: Laparoscopic sleeve gastrectomy (LSG) is becoming the most popular bariatric procedure and although leaks are not very frequent, are difficult complications that can become chronic. Conservative management often results in prolonged hospitalization and however some patients need surgery. We report a case of a recurrent fistula after LSG who was managed with a laparoscopic total gastrectomy (LTG).

Methods: A 36 years-old female presented a chronic gastrocutaneous fistula after 4 years from LSG for morbidly obese. After TPN and a first unsuccessful laparoscopic suturing of the leaking staple line, patient presented again gastrocutaneous fistula and underwent to LTG with standard Roux-en-Y limb. Oesophago jejunostomy was performed with anvil loaded using transoral technique and end-to-side anastomosis through circular stapler.

Results: The postoperative course was uneventful and the patient was discharged without any early complications. Ten weeks later the patient is well.

Conclusions: LTG with Roux-en-Y limb can effectively treat recurrence gastrocutaneous fistula and chronic leaks after LSG when conservative management and staple line suturing were unsuccessful.

V.562 LAPAROSCOPIC RE-REVISION OF A ROUX EN Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY FOLLOWING A RYGB WITH SECONDARY GASTROJEJUNAL SLEEVE RESECTION

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Background: Laparoscopic Roux en Y gastric bypass has proven the test of time to be the gold standard bariatric procedure. But still weight regain has been a potential issue in the longterm. Many different procedures have been suggested with varying results. One among them would be the gastrojejunal sleeve resection. Here we present our video of a revisional RYGB conversion to sleeve who had earlier received a primary RYGB with revisional gastrojejunal sleeve resection. This leaves us with the potential option of conversion to a Duodenal Switch later if required.

VIDEO:

In the following High definition video shows the following steps

1. After creating pneumoperitoneum, the adhesions were cleared.
2. The gastrojejunal complex completely dissected out
3. The OG junction mobilized from the hiatus and the hiatus approximated.
4. The gastrojejunostomy divided.
5. Using a circular stapler the gastrogastrostomy was performed.
6. After gastrolysis, a sleeve gastrectomy was performed using serial firing of linear staplers.
7. The alimentary limb was removed.

V.586 FAILURE OF CIRCULAR GASTRO-JEJUNAL ANASTOMOSIS

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Introduction: This video presents a possible complication during the gastro-jejunal anastomosis in laparoscopic gastric bypass performed by a circular stapler.

Methods: The anaesthesiologist runs the anvil in the oesophagus by a nasogastric tube. The surgeon took out the anvil through a gastrotomy and then put into the jejunostomy the circular stapler by 12mm peri-umbelical trocar site. The terminal-lateral gastro-jejunal anastomosis is then performed. After the firing, the surgeon opened the circular stapler but he could not remove it. The surgeon filled a resistance removing the instrument and he did not understand what's happened. The surgeon assumed different hypothesis: the first hypothesis is a circular staple malfunctioning, the second one is a technical failure and the third one is a stapler misfiring. In any case, the surgeon prefers to perform another anastomosis. He performed another gastric pouch cranial to the anastomosis and he resected the uncompleted anastomosis. He then removed it by endobag. The second gastrojejunal anastomosis was then fashioned by circular stapler without any problems.

Results: At the end of the procedure surgeon could recognise the problem. In fact there was a mismatch in anvil (25mm) and circular stapler (21mm).

Conclusion: It was very important to remark that, despite this anastomosis was very feasible in experienced surgical hand; it required a skilled expertise in operating room including nursing and anaesthesiologist. This anastomosis depended on surgeon skill but also on operating room organization.

V.612**LAPAROSCOPIC MANAGEMENT OF INTERNAL HERNIA AFTER GASTRIC BYPASS**

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Background: Internal hernia is a frequent late-onset complication after bariatric bypass procedures. It is still debated whether to fix or not the defects in course of such procedures, but surely a diagnostic laparoscopy should be considered in patients with recurrent abdominal pain especially after inconclusive investigations.

Methods: A 51 years old female was assessed for recurrent abdominal pain 3 years after a Roux-en-Y Gastric Bypass, which provided a weight loss of 27 Kg. A CT scan showed signs of mesenteric swirl, so a diagnostic laparoscopy was performed, confirming the suspect of internal hernia at the Petersen's defect.

Results: The video shows a first effort to reduce the hernia pulling the herniated bowel through the defect. This was unsuccessful since the whole bilio-pancreatic limb and the jejuno-jejunal anastomosis were both involved in the hernia. An effective alternative reduction was performed, by pushing the herniated limb through the Petersen's defect after division of adhesions. The closure of the defect was completed with knotless barbed suture.

Conclusions: The laparoscopic approach to internal hernia repair is feasible and safe and it can be successfully applied even in cases where long portions of bowel are herniated.

V.640**CHALLENGES AND PITFALLS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AND HIATAL HERNIA REPAIR IN SITUS INVERSUS TOTALIS**

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Background: Situs inversus totalis is a rare autosomal recessive genetic condition in which all the organs are arranged in a perfect mirror image reversal of the normal positioning. Due to the contralateral disposition of the viscera, the diagnosis and laparoscopic surgical approach of these patients may be more difficult than that of orthotropic patients. Starting from 1991 when Campos and Sipes described the first case of laparoscopic cholecystectomy in situs inversus, other cases of laparoscopic surgery in patients with this condition have been reported in a small number of cases, less than 100 cases worldwide until nowadays, most often for cholecystectomy and much less in the field of laparoscopic bariatric surgery (gastric banding, gastric bypass or sleeve gastrectomy). We present a patient with morbid obesity, hiatal hernia and situs inversus, highlighting the unique anatomy and emphasizing the technical challenges and pitfalls in this case.

Methods: All the investigations performed preoperatively confirmed the reversed positioning of the abdominal organs (upper gastrointestinal radiological studies, ultrasonography, computed tomography). Technical details of the laparoscopic sleeve gastrectomy and hiatal hernia repair, with situs inversus totalis, are presented.

Results: The entire procedure was performed using the reverse of the normal surgical set-up. Appropriate port insertion and surgeon positioning are essential to tackle this problem. Due to the particularity of this case, the position of the video monitor and of the instruments (coagulation instrument, graspers, staplers, liver retractor) were reversed. The main difficulties were the use of the left hand as the right hand and proper understanding of the anatomy at the gastro-esophageal junction. Still we did not experience a longer operative time or more complications.

Conclusions: The laparoscopic approach in cases of situs inversus is feasible, although more complex while the mirror image anatomy not only demands greater surgical skill but also requires careful pre-operative planning for setting up the operation theatre, the positioning of the surgical team, the ports and instruments. Certain technical aspects of this type of surgery are challenging and it is recommended that an experienced laparoscopic bariatric surgeon carry out the procedure but similar outcomes are expected.

V.646**LAPAROSCOPIC MINI-GASTRIC BYPASS AS CONVERSION PROCEDURE OF FAILED TRANSORAL GASTROPLASTY**

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Background: Transoral endoscopy vertical gastroplasty (TOGa®) was offered in recent years to a small group of patients as an investigational alternative bariatric procedure. The TOGa® procedure aimed to endoscopically create a small, restrictive pouch along

the lesser gastric curvature. In spite of satisfying results in selected patients, conversion to another bariatric procedure may be necessary because of unsatisfactory weight loss. Laparoscopic Roux-en-Y gastric bypass and sleeve gastrectomy have been described so far as possible conversion procedures. In this video we described for the first time mini-gastric bypass (MGBP) as a revision procedure of a failed TOGa.

Methods: Among 3 patients who required revision procedure after TOGa®, a 46-years old female patient with a BMI of 44.1 kg/m² was selected for MGBP. The procedure was similar to primary laparoscopic MGBP. We used a five ports technique. The long and narrow gastric pouch was calibrated by using a 40 Fr orogastric tube. The vertical stapling line followed the suture line of the previous gastroplasty and was thus reinforced with a running suture, in order to reduce the risk of leak. A side to side gastro-jejunal anastomosis was performed between the posterior aspect of the gastric pouch and the jejunal loop 200 cm from the Treiz's ligament.

Results: The postoperative course was uneventful. The patient was discharged in second postoperative day after performing a contrast X-rays. Percent weight loss was 21% 3 months after the operation.

Conclusions: Laparoscopic MGBP after TOGa® failure is safe and effective and seems an appealing procedure.

V.660

ALTERNATIVES SURGICAL REVISIONS FOR GERD AFTER SLEEVE GASTRECTOMY

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Background: The gastroesophageal reflux disease (GERD) is frequently associated with obesity. Studies have evaluated the impact of bariatric surgery on the symptoms of GERD. RYGB is the most effective surgical procedure for patients with GERD and obesity. Sleeve gastrectomy (SG) has gained ground in obesity surgical treatment. SG and GERD correlation is multifactorial and the effects of it on the esophagus-gastric junction are uncertain whether the procedure increase or improve the GERD.

Aim: Show two different surgical approaches for patients who developed GERD after SG.

Methods: Two patients underwent SG, asymptomatic for GERD preoperatively and with no evidence of GERD at complementary investigation, developed GERD after surgery confirmed by upper endoscopy, pHmetry and esophagography.

Case 1: Female, 34, previously treated with adjustable gastric band and later with open SG. 3D-CT investigation showed gastric stenosis and revisional procedure with laparoscopic RYGB was done.

Case 2: Female, 46, with previous laparoscopic SG. 3D-CT investigation showed a redundant gastric antrum and fundus, being performed laparoscopic re-sleeve.

Results: Patients had favorable postoperative course, and clinical follow-up are presented asymptomatic for GERD.

Conclusions: Morfologic studies are necessary to define anatomical and physiological factors as responsible for the increased prevalence of GERD after SV and the best approach for these patients treatment.

V.685

MODIFIED LAPAROSCOPIC REVERSAL OF ROUX EN Y GASTRIC BYPASS WITH EXCISION OF MATED HYPOPERISTALTIC ROUX LIMB

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Background: A 55 year-old female post LRYGB in 2009, who presented severe postprandial pain, liquid and solid intolerance after laparotomy for internal hernia and small bowel resection performed not by bariatric surgeons in 2013. Multiple investigations performed and patient admitted many times for TPN as enteral nutrition not tolerated. Elective laparotomy for adhesiolysis did not improve symptoms so laparoscopic reversal of the bypass was decided.

Methods: Abdomen approached with optical entry after Veress. Extensive adhesions and mated Roux limb loops with reduced peristalsis were identified.

Extensive adhesiolysis followed, gastrojejunostomy and gastric remnant dissected and identified. Stapler used to transect through the previous gastrojejunostomy and separate the gastric pouch from the Roux limb. A tension free side-to-side functional end-to-end gastro-gastrostomy was performed. Stapler used to divide distal Roux limb proximal to the previous jejunojunostomy and Roux limb was removed.

Results: Patient tolerated fluids from the first postoperative day and postprandial pain settled. Patient was discharged on third postoperative day and she is currently free of symptoms.

Conclusions: LRYGB complications need to be managed by expert bariatric surgeons. RYGB reversal may be the last option for patients with severe postprandial pain and intolerance of liquids and solids.

V.689
VIDEO PRESENTATION OF A LAPAROSCOPIC CONVERSION FROM GASTRIC BYPASS TO SLEEVEGASTRECTOMY: THE FIRST STEP OF A REDO BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH

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Background: Biliopancreatic diversion with duodenal switch (LBPDDS) is one of the most effective bariatric procedures. LBPDDS can be performed also as redo operation after failed LRYGB. This video illustrates the laparoscopic conversion of LRYGB to sleevegastrectomy (LSG) as first step.

Methods: Female patient, 35 years old. The initial weight was 217kg (BMI 72kg/m²). LSG was done in 2009. In 2010, the weight had been reduced to 138kg and LRYGB was performed. Despite a regular configuration of the LRYGB no more weight loss could be achieved. We performed a laparoscopic conversion to LSG and in 2014 LBPDDS.

Results: After adhesiolysis of the left liver lobe the gastrojejunostomy was resected and blood supply from lesser curvature was saved. It was more challenging to reconstruct the gastric passage because of the prior LSG. The gastrogastrostomy performed with 21mm circular stapler was not sufficient. The defect was closed by a hand-sewn running suture. Care was taken not to compromise the common limb with resection of the Roux-Y-anastomosis. A normal small bowel passage was achieved by linear stapled jejunojejunostomy. Intraoperative gastroscopy demonstrated a regular gastrogastrostomy. The postoperative course was uneventful and LBPDDS was completed 7 months later.

Conclusions: Laparoscopic conversion of LRYGB to LBPDDS is a complex and challenging procedure. In a two step approach with good laparoscopic skills and bariatric experience this is a feasible, safe and effective redo-procedure after failed LRYGB.

V.692
CASE OF HYBRID LAPAROSCOPIC/ENDOSCOPIC DELIVERY OF A MAGNETIC COMPRESSION ANASTOMOSIS DEVICE FOR ENTERAL BYPASS

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Background: A less invasive method for GI bypass would be desirable for treatment of obstruction, obesity or metabolic syndrome. This is the first clinical case report of a hybrid laparoscopic/endoscopic delivery of a magnetic compression device that ultimately creates a large-diameter, implant-free anastomosis.

Methods: Simultaneous enteroscopy and colonoscopy were performed under general anesthesia. The Self-Forming Magnets (SFM) had been preloaded into the biopsy channel of each endoscope and were deployed in the small bowel, respectively, under endoscopic and fluoroscopic visualization. The magnets were coupled together using laparoscopic graspers. Following magnet expulsion, an Upper GI series was conducted 2 weeks post implant to confirm anastomotic patency. A follow-up endoscopy was conducted at 2 months to directly visualize the anastomosis.

Results: A hybrid laparoscopic/endoscopic delivery of a magnetic compression anastomosis device was successfully performed to create a small bowel anastomosis. The patient was discharged on POD #1. Coupled magnets were expelled without pain on POD 28 and were fully intact. Upper GI Series at 2 weeks demonstrated absence of leak and significant flow through the new anastomosis. At 2 month endoscopy, the anastomosis was widely patent and the anastomotic mucosa appeared healthy with no evidence of inflammation or irritation.

Conclusions: A hybrid laparoscopic/endoscopic enteral bypass using novel Self Forming Magnets is feasible and can be safely performed clinically. Coupled magnets are spontaneously expelled following anastomosis formation. At 2 months, the anastomosis is widely patent, leak-free, and healthy appearing due to lack of foreign material.

CARDIOPEXY WITH TERES LIGAMENT – A SIMPLE AND EFFICIENT SURGICAL PROCEDURE TO CONTROL GERD IN LSG

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Background: GERD and hiatal hernia after laparoscopic sleeve gastrectomy (LSG) are often encountered and the benefit from the routinely used procedures respecting the sleeve is limited. Laparoscopic RYGBP is the most efficient alternative in these cases.

Aim: To describe the original adaptation of the surgical technique of teres ligamentum cardiopexy (Narbona-Arnau) in the sleeve patients with hiatal hernia and GERD.

Method: Since 2014, 10 patients with intense GERD after sleeve have been proposed for laparoscopic teres ligamentum cardiopexy (Narbona-Arnau). The preoperative work-up included the Upper GI radiological study, CT evaluation, endoscopy and 24 hours pH monitoring. The presence of hiatal hernia was evident in all the cases.

The laparoscopic technique is presented in this video. The gastroesophageal junction, the diaphragmatic crus and the inferior esophagus are carefully dissected. Posterior and anterior 2.0 nonresorbable stitches are used to approximate the hiatus. The round ligament is carefully dissected, avoiding any thermal/mechanical injury and passed tie-like around the cardia, fixed to the stomach and then to itself. By means of this procedure the esophageal sphincter competence has been improved.

Results: all the surgeries were laparoscopically completed without intraoperative or postoperative complications. Time of surgery 45+/- 15 min. The remission of the reflux symptoms was noticed in all the patients, while the 6 months postoperative endoscopy and 24 hours pH monitoring showed significant improvement.

Conclusions: the described adaptation of the surgical technique of teres ligamentum cardiopexy (Narbona-Arnau) in the sleeve patients with hiatal hernia and GERD has proved to be an efficient alternative to control gastroesophageal reflux disease after LSG

V.783

ENDOSCOPIC SURGICAL MANAGEMENT OF ENLARGED STOMA: REVISIONAL BYPASS PROCEDURE

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Background: We present the case of a 45-year-old male, who received a Roux-en-Y gastric bypass 2 years prior. Patient presents symptoms of weight regain and dumping syndrome, with meager (partial) resolution of comorbidities such as Type II Diabetes Mellitus and Hypertension. Upon further inspection, CT Scan with contrast imaging indicated quick emptying of the gastric pouch attributed to an enlarged stoma. The most common abnormality following a failed Roux-en-Y gastric bypass, with many studies attributing over 70% failure rate, is attributed to an enlarged stoma. The following video depicts an incisionless surgical management of stomal enlargement outlining the risk, benefits, and solutions necessary for a successful revisional bariatric procedure.

Methods: Patient underwent general anesthesia and endoscope was introduced to gain visualization of the stoma. With the endoscope in place, an endosuture utilizing 2-0 Polypropylene and Suture Cinch provided primary closure of right crux of the stoma. Patient was accessed (Weight Check, Blood Draw, General Examination) pre-operatively and 1 week, 1 month, 3 month, 6 month post-operatively.

Results:

	1 week	6 months
Excess Weight Loss	Before Revision = 36.9%	After Revision = 67.8%
Resolution of Diabetes Type II (HbA1c Level)	Before Revision = 7.3%	After Revision = 4.1%
Resolution of Hypertension (Systolic/Diastolic) (140/90)	Before Revision = 156/95	After Revision = 132/91
Complications	None	

Conclusions: Incisionless surgical management of stomal defects is a viable safe revisional bariatric procedure, leading to reasonable weight loss and resolution of comorbidities of obesity.

V.799

LAPAROSCOPIC REVISION OF ROUX-EN-Y GASTRIC BYPASS WITH PARTIAL GASTRECTOMY FOR GASTROGASTRIC FISTULA

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Background: J.W is a 41-year-old Caucasian female who underwent laparoscopic Roux-en-Y gastric bypass surgery for morbid obesity in 2004. Reportedly, her surgery was uneventful. She only spent two-night hospital stay before her discharge home. She has been experiencing cumbersome complaints since her third week post surgery. This consists of persistent dysphagia to solid food, chronic abdominal pain, bilious vomiting and horrendous heartburn. Her diagnostic work-up confirmed the presence of a moderate size (1 cm in diameter) gastrogastric fistula. The patient was subjected to laparoscopic takedown of the fistula with a Roux-en-Y gastrojejunostomy reconstruction and partial remnant gastrectomy.

Methods: A video presentation of the corrective surgery summarized in key steps.

Results: The patient did very well with minimal EBL (< 50 cc). She only stayed 2 nights in hospital. She has followed up through the office as instructed and has experienced a complete resolution of her preoperative complaints.

Conclusions: Laparoscopic corrective surgery for gastrogastric fistula is safe and feasible. It leads to the complete resolution of the patient complaints when the right candidate to surgery is selected.

V.807

SIMULTANEOUS LAPAROSCOPIC REPAIR OF A MORGAGNI HERNIA AND SLEEVE GASTRECTOMY

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During pre-operative evaluation, a morbidly obese patient had an abnormal chest Xray that showed a right chest mass. MRI showed this to be a large Morgagni diaphragmatic hernia. This was repaired simultaneously with a previously non-described method at the same time as a sleeve gastrectomy was performed. The findings are presented with a brief operative video.

V.829

CONCOMITANT ENDOSCOPIC REMOVAL OF ADJUSTABLE GASTRIC BAND AND ITS CONNECTING TUBE ERODED TO STOMACH AND DUODENUM.

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Background: Laparoscopic Adjustable Gastric Banding (LAGB) is a safe and effective bariatric procedure providing long term weight control. However patients should be closely followed-up for minor and major long-term complications. Band erosions are common complications where patients present with persistent nausea, abdominal pain, weight gain and recurrent infection of the port and tubing system. If not treated it can lead even to fatal bleeding, mechanical bowel obstruction and perforation. Here in we show a video description of an endoscopic removal of a complicated eroded gastric band where the connecting tube also eroded to duodenum.

Methods: 32 years old female who underwent a laparoscopic gastric banding procedure 10 years ago. During her routine follow-up period she underwent a gastroscopy procedure due to chronic abdominal pain and nausea.

Results: Gastroscopy revealed almost fully migrated gastric band at the corpus of the stomach also when we explore the duodenum we saw that connecting tube has eroded to bulbar part of the duodenum just below the pylorus and made a loop. The port is removed first under local anesthesia and then the eroded band was cut via endoscopic cutter system also the connecting tube is also removed along the band by a grasping snare.

Conclusion: All the (LAGB) patients with gastrointestinal symptoms, port infection and weight regain should undergo an endoscopic evaluation. Endoscopic removal of the band is feasible and safe and eases further redo surgery.

V.830

LAPAROSCOPIC SLEEVE GASTRECTOMY USING THE MIDSLEEVE®MID: HOW TO PROPOSE A MORE REPRODUCIBLE SLEEVE GASTRECTOMY ?

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Background: A growing body of evidence supports the laparoscopic sleeve gastrectomy (LSG) is a safe and effective procedure for sustained weight loss and amelioration of weight-related co-morbidities. However several technical points are discussed concerning the way to perform this procedure. In order to promote a standardized operation, our team has designed a calibration tube (MIDSLEEVE®MID) that allowed us to perform a very accurate gastric resection for each patient.

Methods: A silicone gastric tube (37 French) with a distal balloon is inserted by the anesthesiologist at the beginning of the operation in the esophagus. The gastric dissection is starting from the His angle to the antrum. Then, the MIDSLEEVE is pushed in the stomach until to reach the level of the Antrum. 50cc of saline is inserted in the balloon in order to calibrate the size of the future sleeve (length of the balloon is 6 cm when 50cc are inside). The transection of the stomach will begin with a high accuracy at 6 cm from the pylorus. An average of 7 green cartridges of Echelon® Ethicon with Bioseamguard® GORE are routinely used to perform the gastrectomy.

Conclusion: The use of MIDSLEEVE allows the surgeons to propose a more standardized procedure and facilitate the operation in a surgeon and anesthesiologist point of view.

V.832

‘TWO PORT SLEEVE GASTRECTOMY (SG)’: A BETTER OPTION THAN SILS?

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Background: Reduced port SG is more often performed as single incision/port laparoscopic surgery (SILS) preferably in younger patients, requiring cosmetic benefits of the scars. The video demonstrates a two port laparoscopic SG as an easier and cosmetically acceptable option.

Methods: 22 patients underwent ‘two port SG’ with 12 mm intraumbilical port, 5 mm loin crease port and a 2mm epigastric needle instrument. The operative time, cosmetic benefits were compared with equal number of patients matched with age and BMI (BMI < 45kg/sq.mt)

Results: ‘Two port SG’ was easier due to better triangulation and required less operative time and was cosmetically comparable with SILS. The cost of the SILS port was saved. There was no morbidity or any conversions.

Conclusion: ‘Two port SG’ is feasible and safe in selected patients and can be an alternative for SILS.

V.834

BYPASSING THE STENT FOR LEAK AFTER SLEEVE GASTRECTOMY

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Background: Leaks after sleeve gastrectomy are resistant to treatment and the management is yet to be standardized. However, there was a preference towards laparoscopic lavage and stenting, in some centres. The video presents a technique of treating the leaks with a laparoscopic gastric bypass and Thal’s patch with the alimentary loop.

Method: Seven patients with acute leak at the angle of His presenting within 3 weeks after surgery were treated with laparoscopic conversion to Roux-en-Y gastric bypass and with the closure of leak with or without a Thal’s patch of alimentary limb, (5 with patch, 2 without) with a left sub-hepatic drain kept for a longer duration.

Result: Gastrograffin swallow CT on day 15 showed no leakage in 6/7 patients and they could be started oral feeds thereafter. In 1 patient tiny fistula persisted for 15 more days before it healed. Patients were more comfortable as compared to those treated with stent earlier in our experience, and the recovery time was shorter.

Conclusion: Gastric bypass can be an option to treat leak after Sleeve Gastrectomy instead of using stents, for better patient comfort and early recovery time.

V.887

SURGICAL MANAGEMENT OF POST-OPERATIVE DIARRHEA AND HYPOALBUMINEMIA AFTER MINI GASTRIC BY-PASS: A CASE REPORT

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Background: Diarrhea and hypoalbuminemia is a rare side effect in gastric mini by-pass.

Aim: We present a case of managing postoperative persistent diarrhea and hypoalbuminemia in patient who initially treated with mini gastric by-pass.

Case presentation: A 63 female morbid obese patient with BMI=45.53 and co-morbidities was treated with laparoscopic mini gastric bypass. The efferent intestine limb length was planned at 2.5meters. At 6 months follow up the patient's BMI improved to 32.9 and a significant improvement in the co-morbidities was noticed. However the patient complained of diarrhea (>8 daily) and her blood tests showed hypoalbuminemia. The conservative methods failed to invert the side effects. A decision of the reconstruction of the anastomosis was planned in order to decrease the length of the efferent limb. The length of the afferent limb was measured at 4.1 meters. A re-do of the anastomosis was performed with efferent limb length measured at 1.70 meters. The patient showed an improvement in daily habits and the albumin levels significantly rose. The BMI was 30,18 at the 1st post-operative month and 27,82 at the 6th post-operative month.

Conclusion: Reducing the efferent limb length in gastric bypass may used to manage post operative diarrhea and hypoalbuminemia in cases that conservative measures fail, without influencing the metabolic effect of the surgery.

V.889

A RARE CASE OF GASTRIC BAND SLIDING INTO THE JEJUNUM

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Aim: The purpose of this study is to report a case of gastric band translocation into the small intestine.

Case presentation: A 39 year old female patient presented in our department due to diffuse abdominal pain and vomiting started 10 days ago.

The patient had a history of Gastric Band placement in 2007 for morbid obesity (BMI: 48,9 Kgr/m²)

During the next four years the patient refers a total weight loss of 60 Kgr. At the time of patient's admission the gastric band was already empty for 4 months. The abdominal US revealed a cholelithiasis without signs of cholecystitis or other pathological findings

The patient had an upper GI series with gastrografin that revealed a gastric band translocation towards to the small intestine. Furthermore a CT scan of the abdomen showed that the gastric band was located into the jejunum.

The patient was submitted to an explorative laparoscopy. We performed laparoscopically a 2 cm incision of the jejunum and removed the gastric band. The jejunum was then closed through laparoscopic performed intracorporell sutures. On the 2nd postoperative day the patient had a liquid diet, a normal postoperative period and was discharged on the 5th postoperative day.

Conclusion: A rare complication of gastric band sliding through stomach into jejunal lumen may be presented as a cause of abdominal ileus and can be successfully managed laparoscopically.

V.910

UNEXPLAINED JAUNDICE AFTER ADJUSTMENTS IN A LAGB PATIENT: REPORT OF A VERY RARE CASE

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Background: Laparoscopic adjustable gastric banding (LAGB) has been a popular form of weight loss in the past decades. There are a few reports of misplaced bands from inexperienced teams; found too high around the esophagus or in the ante-gastric position around the stomach, but also around the left liver lobe or other bizarre locations. A rare case of jaundice following adjustments in a LAGB patient is presented in this paper.

Methods: A 46-year old woman who underwent surgery for LAGB placement 7 months prior to her visit to us, presented to our outpatient department with jaundice (bilirubin =3,6), associated with band adjustments. We aspirated 7cc from the band and proceeded with magnetic resonance and computerized tomography, which to our surprise revealed an adjustable band misplaced around the hepatoduodenal ligament. Immediately the patient was advised for surgical removal of this band.

Results: A robotic approach was selected for better visualization and dexterity of the instruments in the case of anticipated technical difficulty. Soon after creation of the pneumoperitoneum the band was found around the hepatoduodenal ligament and the portal triad (hepatic artery, portal vein, common bile duct). A bougie was introduced to the stomach and the duodenum. Careful dissection around the band took place and the band was removed using monopolar scissors and bipolar cautery carefully avoiding the right gastroepiploic vein after entrance to the omental bursa. Following that, careful excision of the reactive capsule was performed. After completion of the procedure, the band and the capsule were removed through the incision for the camera port. A no19 Jackson Pratt drain was put in place. Patient followed a normal postoperative course and was discharged the following day with normalized bilirubin levels.

Conclusions: Laparoscopic adjustable banding has been considered the safest bariatric operation and probably for this reason many inexperienced teams have tried to use it with variable results and increased rates of complications. Experience of the operating team and surgical technique are of extremely high importance for correct placement of the adjustable gastric band.

V.925

EARLY RECOGNITION AND TREATMENT OF LEAK FROM UNUSUAL SITE AFTER GASTRIC BYPASS

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Background: We present the case of a 40-year-old female with a BMI of 46.3 who underwent laparoscopic gastric bypass (RYGB). On day 3 post-operatively, the patient complained of sudden, severe epigastric pain. Urgent CT demonstrated a leak.

Methods: The patient was geared for surgery and leak was noted to be due to staple line failure along the lateral wall of gastric pouch. Within 4 hours of presentation, the patient was in the operating theatre and had primary closure of the leak site. The patient made an uneventful recovery and was discharged 5 days later.

Results: Most leaks after RYGB occur at the anastomosis sites either the gastrojejunostomy or the jejunojejunostomy. In this case, the leak can be attributed to a technical failure of the staple line. With early diagnosis and expedient repair, the protracted recovery period usually associated with post-operative leak was avoided.

Conclusions: Leak after gastric bypass can occur for a number of reasons, including staple failure, and at various locations. Expedient treatment avoided significant further morbidity. Key to this is early recognition of leak and prompt action to repair it. The stapling device was an old generation device which if replaced with the up-to-date technology, might prevent this misfortune.

V.954

A NEW WEIGHT LOSS CLAMP FOR BARIATRIC SURGERY

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Background: All the surgical techniques for bariatric surgery require cutting, stapling, removal of stomach, altering the anatomy, or maintenance and adjustment of the device. This new clamp requires none of the above. The clamp was created to be a vertically restrictive bariatric procedure, mimicking the Magenstrasse Mills operation, without any stapling of the stomach, in hopes of achieving significant, substantial and lasting weight loss.

Methods: A removable silicone covered Titanium clamp is placed parallel to the lesser curvature. The clamp separates the stomach into a restricted medial segment and a much larger lateral segment. The clamp has an inferior aperture to let the gastric juices from the lateral segment drain into the antrum, in their usual path.

Results: 68 pts have had the clamp implanted over a two year period. There have been no erosions, conversions, deaths. In the first year nine clamps have had to be removed due to slippage from the sutures breaking the silicone. A modification of the clamp placing Titanium around the fixation area has resolved the problem, and no slippages have occurred since. Significant weight loss has been achieved.

Conclusions: The clamp appears to be well tolerated, safe and successful in achieving weight loss in this pilot study. Further studies need to be performed to better evaluate this technique

POSTER & ORAL SHORT COMMUNICATIONS

OP.002

ROLE OF PREOPERATIVE ENDOSCOPY IN BARIATRIC SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Routine preoperative endoscopy (EGD) before bariatric surgery is controversial. European and North American guidelines differ on their recommendations. This systematic review aims to determine the prevalence of clinical findings on preoperative EGD.

Methods: A systematic search was conducted using MESH terms 'Bariatric Surgery', 'endoscopy', and 'preoperative'. Inclusion criteria included any study describing results of preoperative EGD for any bariatric surgery. Excluded studies were those with less than 10 patients, patients under 18 years old, or patients undergoing revisional surgery. Prevalence of pathologic findings at EGD were extracted.

Results: Forty-eight studies were included in the final review, consisting only of patient series'. This comprised 12,261 patients with mean (SD) age of 40.5 (1.3) years and BMI of 46.3 (1.5) kg/m². The majority of patients (77.1%) were female. Changes in management resulting from EGD were reported inconsistently and with varying definitions. Twenty-one studies found changes in medical management in 27.3% (range: 7-70%) of patients. Twenty-four studies found changes in surgical management in 7.5% (range:0-86%) of patients. Changes in surgical management included changing the bariatric procedure, additional procedures, operative delays or cancellation. Other important findings (Barrett's esophagus, malignancy) were rare.

Conclusion: Definitions and reporting of EGD findings prior to bariatric surgery were heterogeneous. The proportion of findings leading to significant changes in surgical management was low. The majority of changes in medical management pertained to H.pylori, and could be alternatively managed with non-invasive testing. The incidence of serious findings such as cancer appears to be very low.

OP.008

LAPAROSCOPIC SINGLE ANASTOMOSIS SLEEVE ILEUM BYPASS (SASI BYPASS): TECHNIQUE AND PRELIMINARY RESULTS

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SASI bypass is a Novel Metabolic/Bariatric Surgery operation based on mini gastric bypass operation and Santoro's operation in which a sleeve gastrectomy is followed by an side to side gastroileal anastomosis. we review the results obtained on the first 50 patients who underwent laparoscopic SASI bypass with one year follow up. Sleeve gastrectomy was performed over a 36-Fr bougie, 6 cm from the pylorus, 200 cm from the ileocecal valve the ileum brought to side with the antrum. 17 men and 33 women with mean BMI 47 Kg/m² were operated on. Hypertension was present in 25%, sleep apnea in 10%, hypertriglyceridemia in 70%, Hypercholesterolemia in 50% and all patients are type 2 diabetes, most of them have antidiabetic therapy for at least 3 years. There are one complete stricture at gastroileal anastomosis which is revised after 3 months. Follow up is complete in all patients. EBWL reached 95.6% at one year. At one year mild anemia in one patient and one patient has low albumin level but above 3, all patients have normal glucose level in the first month after surgery with no need to antidiabetic therapy. SASI bypass is a promising operation which offers excellent weight loss and metabolic result. The elimination of two ways for passage of food and one anastomosis decrease nutritional deficiency and the possibility of surgically related complications.

OP.015

SURGICAL OUTCOME OF 100 FULLY ROBOTIC VERSUS 100 LAPAROSCOPIC GASTRIC BYPASS PROCEDURES IN A HIGH VOLUME CENTER

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Introduction: The introduction of robotics in bariatric surgery is a novel development since the beginning of this century. The aim of this study is to compare surgical outcome of the robotic gastric bypass with the laparoscopic gastric bypass.

Methods: A retrospective study was conducted on 100 fully robotic gastric bypasses (FRGB) and 100 fully laparoscopic gastric bypasses (FLGB) performed by a single surgeon. Surgical outcome was analyzed by evaluating surgical time (ST) and operation room time (ORT), morbidity and mortality, and length of hospital stay.

Results: In the FRGB and FLGB group respectively 92% and 80% of operated patients were female ($p=0.024$). Mean age was 39 (range 20–62, SD 10.21) and 42 (range 18–65, SD 11.87) years ($p=0.158$). Mean BMI was 40 (range 35–47, SD 2.66) and 42 (range 35–56, SD 4.75) ($p<0.05$). The ST was 67 (range 39–210, SD 22.46) and 31 (range 18–62, SD 9.12) minutes ($p<0.05$). Mean ORT was 117 (range 80–257, SD 30.13) and 66 (range 38–101, SD 12.68) minutes ($p<0.05$). The 30-day morbidity rate was 5% in both groups, with no mortality. The major morbidity rate was 3% and 1% ($p=0.62$). Median hospital stay was 2 postoperative days in both groups. A learning curve, observed in stabilizing ST and ORT, developed after 25 procedures.

Conclusion: The FRGB is a feasible and safe procedure, comparable with the laparoscopic counterpart in terms of surgical outcome. Although more time is needed, a standardized technique results in a fair operation time in the hands of an experienced surgeon.

OP.018

LAPAROSCOPIC SLEEVE GASTRECTOMY IN SITUS INVERSUS TOTALIS

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INTRODUCTION:

SITUS INVERSUS TOTALIS .A CONGENITAL ANOMALY PRESENT IN APPROXIMATELY 0,01% OF THE POPULATION,RESULTS IN COMPLETE MIRROR IMAGE REVERSAL OF ALL THORACIC AND ABDOMINAL ORGANS.TRANSMITTED THROUGH AUTOSOMAL RECESSIVE INHERITENCE.THESE ANOMALIES HAVE BEEN IN VOGUE SINCE THE 17TH CENTURY.THE LAPAROSCOPIC LITERATURE HAS SEVERAL REPORTS OF SUCCESSFUL BARIATRIC PROCEDURES IN PATIENTS WITH SITUS INVERSUS DESPITE THE EXTREMELY LOW PREVALENCE OF THIS CONDITION.PREVALENCE OF MORBID OBESITY CONTINUES TO INCREASE AND ONLY BARIATRIC SURGERY HAS SUCCEEDED TO IN PROVIDING SUSTAINED WEIGHT LOSS.LAPAROSCOPIC SLEEVE GASTRECTOMY(LSG)ACCOUNTS FOR THE MAJORITY OF BARIATRIC PROCEDURES PERFORMED WORDWIDE,ESPECIALLY IN GULF AREA.

MOST OF GLOBAL DOCUMENTED PROCEDURES IN SITUS INVERSUS INVOLVE GASTRIC BANDS, GASTRIC BYPASS, AND CHOLECYSTECTOMIES.VERY LIMITED DATA ON LSG IN SITUS INVERSUS TOTALIS WITH THIS CASE BEING THE FIRST OF ITS KIND IN KUWAIT.

CASE REPORT:

A 35 YEARS OLD LADY MORBIDLY OBESE WEIGHING 120 KG AND BMI OF 43 WAS ELECTIVELY ADMITTED TO THE HOSPITAL.SHE HAD TRIED A NUMBER OF DIET AND EXERCISE PROGRAMMES BUT FAILED TO SUSTAIN A REDUCED WEIGHT LOSS.SHE WAS A KNOWN CASE OF DEXTROCARDIA SINCE BIRTH.SHE UNDERWENT STANDARD PREOPERATIVE WORKUP INCLUDING:PHYSICAL, LABORATORY, RADIOLOGICAL ,ENDOSCOPIC(GASTROSCOPY)AND ANAESTHETIC ASSESSMENT,,,,SATISFYING OUR SELECTION CRITERIA FOR SURGERY.

FOLLOWING GENERAL ANAESTHESIA,PATIENT WAS PLACED IN REVERSE TRENDLENBERG POSITION.THE FIRST ASSISTANT SURGEON STOOD TO THE LEFT SIDE OF THE PATIENT AS CONTRAST TO USUAL RIGHT SIDE.TROCARS POSITION WERE ALSO MIRROR IMAGE.OPERATIVE FIELD WAS UNCOMFORTABLE AS IN RIGHT HANDED PERSON WRITING BY LEFT HAND.OROASTRIC TUBE INSERTION WAS DIFFICULT.PRIMARY SURGEON HAD TO COME TO RIGHT SIDE TO REACH THE RIGHT CRUS.THE MAIN CHALLENGE OF SURGERY WAS THE ORIENTATION OF SURGICAL FIELD,DISSECTION OF SHORT GASTRIC VESSELS,TIGHT ADHESIONS BETWEEN THE SPLEEN AND FUNDUS OF STOMACH,DISSECTION AT GASTRO-OESOPHAGEAL JUNCTION,VISUALIZATION OF THE CRUS AND FINALLY THE MARKEDLY ENLARGED LIVER.

TOTAL SURGICAL TIME WAS 110 MINUTES.

OP.022

INTEGRATED HEALTH: “PREOPERATIVE AND POST OPERATIVE NUTRITIONAL STATUS”

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Introduction: Obesity is epidemic, a very morbid condition that has several health consequences, it continues its popularity among bariatric surgery which rises for both severely obese adults and adolescents and very recently among children’s..The bariatric patients on long term of nutritional habits and aspects during pre and post-operative. They are at risk of major mal-nutrients absorption.

Objectives: To study the nutritional Intervention for Bariatric patients lifestyle in subjects with type 2 diabetes in UAE: A randomized controlled trial in real life setting. To study the protein – calorie mal-nutrients, vitamins and mineral deficiency absorption during post-operative stage have may limit optimal health and healing process. Care and prevention during post-operative to reinforce important principals associated with long-term weight loss maintenance. The value of educational management team organization including psychiatrist.

Methods: A clinical case study: sleeve patient case – the absorption of nutrients during pre and post-operative stage with their complications. can be maximized by adhering to eating guidelines, supplemental prescriptions. A clinical case study: Gastric bypass patient case - the absorption of nutrients during pre and post-operative stage with their complications. Usage of supplementation essential ingredients.The new era protocols that will be discuss it’s quick relief for the post bariatric cycle into the doctors existing medical practice, regardless of the doctors specialty.Trial special physical activity method as essential component for both case studies.

Results 68% of my total study with patients shown success as long term follow ups. The study suggested necessary steps with the patient's digestive track and absorption for higher success. This leads to more practices during post planning, developing, implementing and evaluating the nutritional complications and odds.

Conclusion: The success of Bariatric patients is not based on the Metabolic surgery; the major role is during the first 3 – 5 years of life cycle for post-operative patients. The efficiency of post-operative Bariatric surgery lies on the wellness team department besides the pre stage. To my knowledge a larger study is needed. My up-coming research case studies will cooperate with Bariatric patient of different Arab nationalities and their complicated traditional related health issues.

OP.030

WEIGHT LOSS POST EXCISION OF A LARGE BLIND JEJUNAL LIMB “CANDY CANE” AFTER RYGB

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Introduction: RYGB is a common and effective type of weight reduction surgery that is performed worldwide.

Failure to loose weight after surgery can be attributed to many technical as well as behavioral factors. Large gastric pouch, wide gastro-enteric anastomosis, and short alimentary limb had all been reasons for redo surgery. However, less commonly, long blind jejunal loop (Candy Cane) is another cause of failure to loss weight that has to be considered.

Clinical Case: We present a case of a 35 years old lady, with a BMI of 47, underwent laparoscopic RYGB for weight reduction. Her BMI dropped to 33 one year after surgery. However, she presented to us 2 years later complaining of weight regain with BMI of 41. Up on assessment, upper GI endoscopy and gastrografin meal revealed a large (13cm) blind jejunal limb, otherwise known as candy cane limb.

She underwent an excision of a large blind jejunal limb together with re-sleeving the gastric pouch.

Postoperative recovery was uneventful and she was discharged second day postoperatively. She lost 15 kg three months after surgery.

Conclusions: Large blind jejunal limb post RYGB can contribute to failure of weight loss or weight regain in the long term. Excision of large blind jejunal limb could therefore results in extra weight loss. However, re-sleeving the gastric pouch may also add to the overall benefit in some cases.

OP.032

THROMBOPROPHYLAXIS IN BARIATRIC SURGERY IN THE UK - A NATIONAL SURVEY

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Introduction: Obesity is associated with an increased risk of venous thromboembolism (VTE) but currently there is no consensus on the optimal VTE prophylaxis in bariatric patients.

Objectives: The aim of this survey was to assess VTE prophylaxis across UK bariatric centres.

Methods: An online 12-question survey on thromboprophylaxis protocols for bariatric surgical patients was distributed to Consultant Bariatric Surgeons and Anaesthetists from 47 public (NHS) and private UK centres.

Results: 27 bariatric centres (22 NHS, 5 private) responded. Intraoperatively, all surveyed hospitals used intermittent pneumatic compression devices (IPCD), 96.3% applied anti-embolic compression stockings (TEDs) and 48.1% administered low molecular weight heparin (LMWH). All centres used both TEDs and LMWH postoperatively and 59.3% continued using IPCD. 66.7% used a standard dose of prophylactic LMWH whereas 33.3% used a weight-adjusted regimen. LMWH use is extended beyond the in-hospital stay in 55.6%. 37% of units supply patients with TEDs on discharge. Oral anticoagulants are stopped preoperatively (at a variable time) with 74% of bariatric units administering bridging therapy with LMWH. 96.3% stop use of Clopidogrel and 51.9% withhold Aspirin in the perioperative period for a variable length of time.

Conclusion: All surveyed bariatric centres use IPCD intraoperatively and LMWH and TEDs postoperatively. However, there is no uniform practice in multiple aspects of VTE prophylaxis. Therefore there is a need for national guidelines on thromboprophylaxis in bariatric patients to ensure consistent best practice across the UK.

OP.042

LAPAROSCOPIC BANDED SLEEVE GASTRECTOMY: OUR TECHNIQUE

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Standard ports include one 10mm (Supra umbilical for camera), one 12 or 15mm port (for the staplers) and two 5mm ports (working ports).

The lesser sac is entered by opening the gastrocolic ligament. The greater omentum is dissected all along the greater curvature of the stomach, extending 3 cms proximal to pylorus up to the angle of His. A 32 French bougie is then passed transorally into the pylorus, placed along the lesser curvature with 3cm proximal to pylorus which is chosen as the starting point. A laparoscopic stapler, with a green load, is introduced and fired on the antrum, towards the Angle of His. Staplers are fired consecutively along the length of the bougie until the redundant body and fundus of the stomach is resected completely, leaving about 1 cm of the stomach at the angle of His.

Several authors have described over sewing the long staple line, while others have employed buttressed staples or fibrin glue as a sealant. We over sew the entire staple line using endostich.

After the creation of the Sleeve, a window is created 3cm - 4cm below the gastro - esophageal junction along the lesser curve. The band is tunneled along the window and around the gastric sleeve and locked. The band is then fixed to the anterior and posterior wall of sleeve with non absorbable seromuscular sutures. The specimen is removed through the 12-mm port.

OP.045

THE OPTIMAL USE OF THE VISIGI TUBE (FENESTRATED OROGASTRIC TUBE) FOR THE VERTICAL SLEEVE GASTRECTOMY

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There are many concerns when using a bougie during the creation of a Vertical Sleeve Gastrectomy. The bougie is a relatively rigid unforgiving stent that can cause trauma and result in a perforation of the Esophagus and the Stomach. Using the bougie requires multiple intubations of the Esophagus and stomach for decompression, followed by stenting, and sometimes followed by an endoscope or another orogastric tube for testing of the staple line. The bougie requires skilled staff to place the bougie or requires a surgeon to break sterility for safe placement. The bougie offers no ability to decompress the stomach, it does not provide suction, or a mechanism to test the burst strength of the staple line with a controlled force of air.

The ViSiGi tube is a 107 cm fenestrated orogastric that is

- Flexible-Non sterile fenestrated OG tube
- Disposable and not reusable
- 107 cm long, 32,36, and 40 F
- Integral suction regulator 100 – 150 mmHg
- Slide valve for open and closed channel
- Squeeze bulb with a pressure regulator
- Closed rounded a traumatic tip

The tube provides many advantages over the use of a bougie and/or a gastroscope. Using this tube eliminates the need for multiple intubations for decompression, stenting, and testing. The tube requires one placement. It has adequate girth to be easily identified. Decompression is easily obtained due to the fenestrations. The tube is relative safe with a blunt tip and pliable material. The lesser curvature is well delineated after it is placed to suction. This allows for minimal fundus to reduce during the stapling and can result in using less stapler cartridges. Suction and testing is atraumatic as it is controlled by an inline regulator. Lastly, the ViSiGi tube can be used in other procedures such as the Gastric Bypass, Duodenal Switch, Nissen Fundoplication, and Hiatal Hernia repair.

In conclusion, the ViSiGi tube is a safe and effective device that is safe, effective, and possibly superior to other techniques for decompression, stenting, and testing during the Vertical Sleeve Gastrectomy. This video demonstrates the optimum use of the ViSiGi tube during the creation of a Vertical Sleeve Gastrectomy.

OP.050

RE-EXPLORATIONS AFTER ROUX-EN-Y GASTRIC BYPASS

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Background: Laparoscopic Roux-en-Y gastric bypass is the most commonly performed procedure for the management of morbid obesity. Our team has been performing LRYGB for over a decade at a tertiary care facility. To assess the incidence of reoperations after LRYGB, we retrospectively analyzed our prospectively collected data.

Method: Between 2005 to 2014, 1576 patients underwent LRYGB at our institute. All the procedures were performed by a group of 5 experienced surgeons with experience of over 20 years in Minimal Access surgery. The endpoints that were assessed are: weight loss, operative time, indication for reoperation, associated comorbidities.

Results: Out of 1576 patients, 77 patients (4.85) underwent a reoperative procedure. Twenty one patients underwent an elective procedure (laparoscopic cholecystectomy and ventral hernia repair) 56 out of 77 patients underwent an emergency surgical procedure. Indications for reoperation in this group of patients include internal hernia, obstructed ventral hernia, anastomotic leak, perforated marginal ulcer, band obstruction, hemorrhage. The most common indication for reoperation was internal hernia (38/ 77). The incidence

of internal hernia can be significantly reduced by ensuring that all defects are closed meticulously at the time of primary procedure. A high index of suspicion and early intervention in the postoperative period is essential for a timely recovery. The statistical data along with its interpretation shall be presented in the conference as an oral presentation.

Conclusion: Laparoscopic Roux en Y gastric bypass has a very low incidence of reoperations when performed by experienced surgeons with a standardized technique and operative protocol. A vigilant team and recognition of early symptoms of complications is extremely important in reducing morbidity & potential mortality.

OP.055

CONVERSION FROM SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS DUE TO “DE NOVO”

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Background: In the last 15 years, laparoscopic sleeve gastrectomy (LSG) has become increasingly popular as a primary procedure because of its simplicity, relatively safety, and effectiveness to achieve sustained weight loss over time. Current meta-analysis data suggests LSG is the second bariatric operation performed around the world, and only laparoscopic Roux-en-Y gastric bypass (LRYGB) overcomes LSG in prevalence. As demand for LSG increases, so too will the need for revision surgeries. LSG has been reported to carry a risk of GERD. In this clinical situation, conversion to LRYGB is a consistent option for management of GERD complications after LSG.

Methods: We present a case report of a 38 years old female patient who underwent LSG in May 2013 (BMI=43 kg/m²). Patient's postoperative evolution was irrelevant and discharged at second day. One year later patient complained GERD related symptoms and GERD work-up was done to discard “de novo” GERD. Work-up studies included 24h pH testing and esophageal manometry, which confirmed the diagnosis of GERD.

Results: Upon further GERD diagnosis, we decided to convert from LSG to LRYGB. The video shows the main steps of this challenging revisional surgery.

Conclusions: Conversion to LRYGB is a feasible and effective option to manage “de novo” GERD after LSG. Robust experience in revisional bariatric surgery is of paramount importance.

OP.057

INTRA OPERATIVE ENDOSCOPY DECREASES POSTOPERATIVE COMPLICATIONS IN LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction: Laparoscopic sleeve gastrectomy (LSG) represents 42% of bariatric procedure done in USA in 2013 according to the ASBMS. Calibration of the stomach size is one of the essential technical steps of the procedure. Leak, bleeding, twist or stenoses after LSG are causes of major morbidity and mortality.

Aim: To evaluate the role of routine use of intraoperative endoscopy (IOE) in calibrating the size of the sleeve as well as reducing postoperative complications.

Methods: A retrospective review of all LSG cases done between November 2009 and February 2015. IOE was a routine procedure in all cases to check for leak, bleeding, twist and stenosis. If stenosis or a twist was detected, the over-sewing sutures were removed and the endoscopy is repeated. Postoperative oral intake is started once patient is fully awake without routine radiological studies and no drains were placed.

Results: During the study period we performed 279 LSG. The IOE showed a twist or a kink or narrowing in 9 (3.2%) cases near the incisura, the over sewing sutures were removed and endoscopy repeated. Our clinical leak and stenosis rate was 0%. Our excess body weight loss at 1 year and two years were 71.6% and 73%.

Conclusion: The use of the endoscope as a calibration tube helped in identifying stenosis at the incisura intra-operatively which have reduced our clinical stenosis rate to 0% in LSG.

OP.061

BOWEL OBSTRUCTION AFTER ROUX-EN Y GASTRIC BYPASS

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Introduction: One of the complications after bariatric procedure is the bowel obstruction. Rates have been reported, with laparoscopic approach, of 0.6% to 3.5%. Internal hernias constitute the most common cause of obstruction after the surgery and are related with big weight loss and pregnancy postoperative. One of the most frequently symptoms are acute or chronic abdominal pain, which may occur early or late in the postoperative period. Bowel obstructions may occur because of adhesions, internal hernia, intussusception and bezoar. Internal hernias are most common at mesenteric defect and Petersen defect.

Methods:

Demonstrate the laparoscopic approach in cases of bowel obstruction after laparoscopic gastric bypass, for intussusception, phyto bezoar, internal hernia in mesenteric defect, internal hernia in Petersen defect and adhesions.

Results: In most cases, the diagnosis was made preoperatively by computed tomography scan and a few was done during surgery.

1st case: female, 38 years old, 01 year after surgery, she presented with colicky abdominal pain, vomiting and big weight loss. CT demonstrated the target signal. The intussusception was reduced without signs of ischemia.

2nd case: female, 43 years old, with symptoms of abdominal pain and vomiting. CT showed intestinal obstruction due to phyto bezoar.

3rd case: female, 32 years old, 08 months after laparoscopic gastric bypass, presented with intestinal obstruction. CT confirmed the diagnosis. The laparoscopic surgical treatment showed internal hernia in mesenteric space.

4th case: female, 26 years old, 01 year after laparoscopic gastric bypass, chronic abdominal pain. CT scan showed no conclusive results. Patient underwent to a laparoscopic exploration which showed internal hernia in Petersen space.

5th case: female, 45 years old, abdominal pain and vomiting. CT showed intestinal obstruction. Laparoscopic approach showed some adhesions causing bowel obstruction.

Conclusion: Bowel obstruction after laparoscopic gastric bypass is common and requires an early diagnosis and surgical exploration in suspected cases, which is the key to successful outcomes. In select patients the laparoscopic approach is a flexible method in the management of bowel obstruction when performed by an experience laparoscopic surgeon.

OP.062

GASTRIC BYPASS REVISION IN REGAIN WEIGHT

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Introduction: The regain weight is a common problem after gastric bypass in long term. A standard gastric bypass, defined as small gastric reservoir of 15cc and a short Roux limb (45cm), is successful in up to 85% of patients. The main causes of regain weight are binge eating, enlargement of the stomach pouch and dilatation of the jejunal loop just after the gastro-jejunal anastomosis. With the regained weight, comorbidities may return and other deleterious problems for the treatment.

Methods: Show the feasibility of laparoscopic approach restoring the stomach pouch to its original reduced size in patients previously submitted to an open gastric bypass ring with construction of a new pouch to increase weight loss.

Results: Female patient, 35 years old, previously submitted to an open gastric bypass ring 5 years ago, BMI of 42. The patient showed erosion of the ring which was removed by endoscopy. One year later, the ring was replaced at another position. Even so, the patient regained weight, staying with BMI at 42. Endoscopy and X-ray showed a large pouch. The patient then underwent a laparoscopic surgery to pull out the ring, reduce the pouch size and resect the initial alimentary limb and gastroentero anastomosis using an endoscopic linear stapler. The patient had no postoperative complications. Six months after surgery evolved with BMI of 34.

Conclusion: The laparoscopic approach to restore reduced gastric size is a safe and feasible surgery in patients previously submitted to open gastric bypass with ring. It has low risks and good results in weight loss.

OP.068

CONVERSION OF FAILED SLEEVE GASTRECTOMY (SG) INTO ROUX-EN-Y GASTRIC BYPASS (RYGBP)

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Introduction: Sleeve gastrectomy is the fastest-growing bariatric procedure performed worldwide. However, SG as any other bariatric procedure may fail.

Objectives: The aim of the present paper is to analyze the results of the conversion of failed LSG into LRYGBP in order to define the indications to this procedure and report the potential complications.

Methods: We analyzed retrospectively the data collected between October 2005 and June 2014 on a total of 40 patients. Of these patients, 29 were converted because of insufficient weight loss and/or weight regain, and 11 due to severe reflux.

Results: The twenty-nine patients who underwent conversion for insufficient weight loss achieved a mean percentage of EWL of 29,7 % after the SG. After conversion to RYGBP, the BMI reached an average of 30.7 and an overall %EWL of 64.5% was reached. Of the eleven patients converted for symptomatic GERD, 10 had developed de-novo GERD after the LSG. After conversion, 10 out of 11 patients (91%) experienced a profound relief of reflux symptoms and were able to stop PPI medication. Weight regain was also observed before the conversion. After conversion, the BMI reached an average of 31,0 and an overall %EWL of 62.8 was found. Postoperatively, no mortality noted, seven complications were identified (16.67%).

Conclusion: The present study demonstrates that the conversion of failed LSG into LRYGBP is feasible and leads to good results in terms of weight loss and resolution of GERD.

OP.072

FIVE YEAR RESULTS OF ROUX-EN-Y GASTRIC BYPASS IN A HIGH VOLUME CENTRE IN ASIA

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Background: Long term studies of RYGB have sparsely been reported worldwide and in Asia. We hereby analyze our results spanning 5 years of Roux en Y gastric bypass (RYGB) with regards to weight loss, comorbidity resolution, and long term complications.

Material and methods: This study was a retrospective analysis of prospectively collected data of 258 patients operated for RYGB between March 2007 to April 2009 who completed five years duration after surgery until April 2014.

Results: The study included a female preponderance 66.7% .The mean age was 31.03(SD 8.34) years, preoperative BMI was 42.07(SD 7.40) kg/m²,operative time was 75.40 minutes (SD 27.72) and stay was 1.42 (SD 0.93)days.

The mean %EWL was 91.7, 91.5,89.2,84.12, and 84.96 % at 1,2,3,4, and 5 years respectively.

There was 92.85% improvement of diabetes and 76.92% for hypertension. Resolution for hyperlipidemia, hyperuricemia, and fatty liver hepatitis was 83.33%, 88.88%, and 94.28% respectively.

The incidence of early complications (<30 days) was 1.14%.It included an event each of hematoma, abscess, and GJ leak. The incidence of late complications (>30 days) was 27.86%. It included Symptomatic marginal ulcer-related (17.82%) and symptomatic stricture (0.77%). Other complications requiring re-operations included dumping (0.77%), weight regain (1.16%), malabsorption(1.16%),anemia(0.77%), internal hernia(3.48%), and gallstones(1.93%).

The follow up rates in this study were 77.13, 50.38, 36.04, 24.41, and 22.09% at years 1 to 5 respectively.

Conclusion: Our 5-year results of RYGB showed a significantly better sustained weight loss and comparable comorbidity improvement compared to western reported literature. Long term follow up is still a major problem in Asian patients and new strategies need to be developed to improve followup.

OP.078

LAPAROSCOPIC GASTRIC BYPASS STATE OF THE ART TECHNIQUE

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Background: Laparoscopic Gastric Bypass – State of the Art Technique.

Methods: The current gold standard for the surgical management of Morbid Obesity is the Laparoscopic Roux-En-Y Gastric Bypass. The incidence of jejunojunal stenosis is up to 2% in the literature

Results: I report my experience at the American University of Beirut Medical Center of 663 patients. The last 200 cases of zero incidence of jejunojunal Anastomosis by refinement of the technique and use of 2 EndoGIA 60mm side to side anastomosis.

Conclusion: The Video demonstrates the potential to reduce steps, facilitate stapling, closure of defects and avoid anatomical confusion. Therefore, Laparoscopic Gastric Bypass after refinement of technique, is effective, safe with excellent weight loss and low morbidity and mortality, minimal discomfort and early return to normal activity.

OP.083

LAPAROSCOPIC SLEEVE GASTRECTOMY - RETROGASTRIC MEDIAL TO LATERAL APPROACH IS THE STATE OF THE ART TECHNIQUE

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Background: Laparoscopic Sleeve Gastrectomy- Retrogastric Medial to Lateral Approach is the State of the Art Technique.

Methods: Through 4 trocars in the different quadrants of the abdomen and the patient placed in semi sitting position and the surgeon is between the legs of the patient. The first step is to create a window in the lesser sac 6cm from the pylorus at the greater curvature. The stomach resection is done after introduction of 36 French catheter using 3 cartilage of Endo GIA Green 60mm cartilage until the fundus where another 3 cartilage of Endo GIA blue 60mm cartilage used to complete the Gastric resection till the angle of HIS which is dissected retrogastric. The suture line was reinforced by a continuous layer of 2-0 prolene suture and using the methylene blue test for detection of leak.

The last step is the division of the gastric omentum from the resected stomach using ligasure or ultracision and the resected gastric segment is removed from one of the trocars after extending of the incision to 2cm. The first 500 cases done by this technique had zero mortality and one leak treated by CT guided drainage and one case of bleeding treated by laparoscopic suturing and 99% of the cases discharged within 48 hours.

Results: The whole procedure took less than 30 minutes. The excess weight loss in 1 year is 70%.

Conclusions: Therefore, this new technique preserves the blood supply to the remaining stomach, minimal dissection and prevents tension at the suture line with no-mortality, minimal morbidity, minimal discomfort and early return to normal activities.

OP.092

IMPACT OF CONCOMITANT LAPAROSCOPIC SLEEVE GASTRECTOMY AND HIATAL HERNIA REPAIR ON GASTROESOPHAGEAL REFLUX DISEASE IN MORBIDLY OBESE PATIENTS

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Background: Obesity is known to an independent risk factor for development of both GERD and Hiatal Hernia. Hiatal Hernia is present in about 37-50% of morbidly obese patients undergoing bariatric surgery, while 50-70% of the patients undergoing this surgery have symptomatic reflux. There are few studies which address the impact of Laparoscopic Sleeve Gastrectomy (LSG) with crural closure on GERD in morbidly obese patients having Hiatal Hernia. Moreover, the results of these studies are conflicting. In this study, we retrospectively analyzed the symptoms of GERD and use of Anti-Reflux Medications (ARM) in morbidly obese patients with medium to large hiatus hernia and who underwent concomitant HHR with LSG for morbid obesity at our centre.

Methods: It is a retrospective study involving ten morbidly obese patients with medium to large hiatus hernia diagnosed on preoperative endoscopy who underwent LSG and simultaneous HHR. The patients were assessed for symptoms of GERD using a standardized Symptom Score (SS) questionnaire and use of Anti Reflux Medications (ARM).

Results: Of the ten patients, five patients had GERD preoperatively. At the mean follow-up of 11.70± 6.07 months after surgery, four patients (80%) showed complete resolution while one patient complained of persistence of symptoms. Endoscopy in this patient revealed resolution of esophagitis indicating that the persistent symptoms were not attributable to reflux. The other five patients without GERD remained free of any symptoms attributable to GERD. Thus in all ten patients, repair of hiatal hernia during LSG led to either resolution of GERD or prevented any new onset symptoms related to GER.

Conclusion: In morbidly obese patients with hiatal hernia with or without GERD undergoing LSG, repair of the hiatus hernia helps in amelioration of GERD and prevents any new onset GER. Thus the presence of hiatal hernia should not be considered as a contra-indication for LSG.

OP.094

LAPAROSCOPIC GASTRIC PLICATION IS EFFECTIVE FOR LOW BMI PATIENTS

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Background: Till now NIH criteria are still the criteria for patient selection for bariatric surgery. Bariatric surgery is generally not indicated in obese patients with low BMI (<35 kg/m²). When considering weight loss surgery in such patients safety comes first. Laparoscopic gastric plication (LGP) is a fairly new restrictive procedure for weight loss which is known for its superior safety over bariatric procedures. This study aims at studying the efficacy and safety of LGP in patients with low BMI (30-35 Kg/m²).

Methods: In the period between March 2011 and November 2014, obese patients who have BMI > 30 and < 35 were offered LGP as a weight loss surgical option. After preoperative preparation and taking an informed consent, patients were operated upon using a standardized technique of LGP. Patients were followed for %EWL, resolution/improvement of associated comorbidities, early and late complications, mortality and quality of life. Follow up visits were conducted at 3, 6, 12, 24, and 36 months after surgery.

Results: 124 obese patients were enrolled in the study after fulfilling inclusion criteria. 82% of them were females and the mean age was 27.5 (19–48) years. BMI ranged from 30 and 35 kg/m² with a mean of 33.7. At baseline, 4 patients had type 2 diabetes. For those patients, mean preoperative HbA1c was 7.4%. The mean duration of surgery was 65.3 minutes. There was no mortality. Major complications was reported in only one patient (0.8%) who have leakage at the first postoperative day that was managed by conversion to laparoscopic sleeve gastrectomy. Prolonged nausea/vomiting occurred in 6 patients (4.8%) with a mean period of 5.2 days. No reintervention was required in any patient. The mean hospital stay was 2.9 days. No patient required readmission. Postoperative percentage of excess weight loss was 31.4 at 3 months, 51.2% at 6 months, 60.2% at 12 months and 54.9% at 24 months. Only one patient required conversion to laparoscopic mini-gastric bypass for weight regain after 18 months. In the type 2 diabetes subgroup, improvement occurred in 2/4 (50%) of patients at 12 months.

Conclusions: LGP is an effective and safe option for obese patients with low BMI.

OP.096

LAPAROSCOPIC GASTRIC BYPASS REVERSAL WITH GASTROGASTROSTOMY AND RESECTION OF GASTROJEJUNAL ULCER FOR NON-HEALING MARGINAL ULCER

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Background: 43 y/o F with current BMI of 21 with history of gastric bypass in 2004 and perforated marginal ulcer in 2009 presents with severe, epigastric abdominal pain. EGD reveals chronic marginal ulcer refractory to medical treatment and patient undergoes reversal of gastric bypass.

Methods: The liver was dissected off anterior portion of pouch revealing gastrojejunostomy with adhesions between the pouch and jejunum into the remnant stomach with a large ulcer. Stomach was transected about 2cm above the gastrojejunostomy. The gastric remnant was mobilized revealing a hiatal hernia which was repaired with 0 Ethibond stitches. A gastrostomy was created on the gastric pouch and remnant. A linear stapler was fired, reconnecting the pouch and remnant. An Edlich tube was passed down the remnant stomach and oversewing of the gastrostomy was performed with interrupted 2-0 Polysorb stitches followed by Lembert stitches. After confirming an airtight repair using irrigation and insufflation, a pyloroplasty was performed using the hook laparoscopic instrument. Roux limb was transected with linear stapler proximally and reconnected to distal biliopancreatic limb using 45 and 60 linear stapler. The enterotomies were closed using linear stapler. Continuity of the GI tract was visually confirmed and drains were placed.

Results: Postoperatively patient did well. UGI demonstrated no leak on POD #3, patient was discharged home on POD #5 on phase 2 diet.

Conclusions: Refractory marginal ulcers are a known complication of gastric bypass. Reversal offers definitive therapy and can be approached using minimal invasive techniques.

OP.106

EARLY CHANGES IN GLYCEMIC VARIABILITY AND INSULIN SECRETION AFTER BARIATRIC SURGERY OR MEDICAL TREATMENT IN DIABETICS

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Background: The effect of bariatric surgery (BS) compared to medical treatment (MT) on glycemic variability (GV) and insulin secretion is unclear.

Methods: PRODIGES is a RCT of MT versus BS for type 2 diabetes in patients with BMI < 35 and nephropathy. We analyzed acute insulin response (AIR) by intravenous glucose tolerance test (IVGTT) and GV by continuous subcutaneous glucose monitoring (CSGM) before intervention and after 7 days (only BS) and 3 months in 24 subjects submitted to gastric bypass (GB, 8), sleeve gastrectomy (SG, 8) and MT (8).

Results: Initially patients had 51±7 yo, BMI 31±2 kg/m², 5.5(2-17) y of diabetes and HbA1c 8.5 (6.7-14)%, without differences between groups. After 3 months, surgical group showed a significant weight loss and all groups had similar reduction in HbA1c. GV parameters improved at 7 days: Mean Amplitude of Glycaemic Excursions (MAGE) Mean of Daily Differences (MODD) and Standard Deviation (SD) in GB; and SD and MODD in SG, but all returned to baseline at 3 months. MT improved MODD and SD after 3 months. SG increased AIR at 7 days and 3 months.

Conclusions: BS induces a decrease of GV only during the period of greater caloric restriction. A faster gastric emptying, an important determinant of postprandial glycaemia, may explain this. Improved insulin secretion is only observed after SG. The known reduction in ghrelin could explain this difference. MT improves GV without changes in insulin secretion.

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OP.107

MISHAP AND RISK REDUCTION STRATEGIES IN RYGB- A CASE REVIEW

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Case Report: A 45 year old diabetic female with BMI 37.2 was admitted with plan of Roux-en Y Gastric Bypass (RYGB). Standard 5 port procedure with a gastric pouch of approx. 30 ml, biliopancreatic limb length of 50 cm, alimentary limb length of 100cm, linear stapled gastro-jejunostomy 30 mm wide with suture closure of entrotomy, stapled jejuno-jejunostomy 60 mm wide with suture closure of entrotomy and closure of Petersen's and mesenteric defects were planned.

Mishap: After gastro-jejunostomy with linear stapler the entrotomy closure was done, over gastric calibration tube (GCT) tip of which is passed beyond GJ, in two layers, first layer with 2-0 PDS and second with 2-0 silk. While removing GCT it is evident that tube is stuck and not retrievable with traction seen at GJ site.

Management: Entrotomy sutures were removed and after cutting inner layer GCT can be moved deep well beyond anastomotic site. Entrotomy again closed in two layers; procedure completed and leak test done with endoscopy and saline immersion test. After removal of GCT its balloon shows a puncture with leak of air/saline.

Risk Reduction Strategies: Gastric calibration tube should have been passed well beyond anastomotic site keeping balloon in mind. GCT must have been moved after closure of first layer. Other available calibration bougies without balloon must be used or cut the balloon of GCT to prevent such mishaps.

OP.112

INVESTIGATING NUTRITIONAL DEFICIENCIES PRE AND POST SLEEVE GASTRECTOMY

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Background: Sleeve gastrectomy (SG) is relatively a recent bariatric surgery and it has been shown to be as effective as Roux-en-Y gastric bypass in achieving weight loss and resolving the obesity related co-morbidities. There are few studies investigating nutritional deficiencies with this procedure. This study aims to investigate nutritional deficiencies and weight loss in a group of patients pre and post sleeve gastrectomy.

Methods: Retrospective data of patients who had undergone SG between January 2010-2013 was collected from electronic medical records. Data included; anthropometry (weight, height, BMI) and nutritional markers (haemoglobin, Fe studies, Folate, B12, Ca, vitamins D, PTH) pre and at one year postop and were analysed descriptively using SPSS Statistical Software. Reported compliancy with supplementations was recorded.

Results: Data was collected for n= 388 patients (male:female; 103:285) aged 46±12 years with a preoperative BMI of 43.1±8.1 kg/m². The Prevalence of deficiency preoperatively included vitamin D (57%), vitamin B12 (3%), low ferritin (15%) and elevated parathyroid hormone (24%). At one year postoperatively, deficiencies included vitamin D (23%), low haemoglobin (17% females, 3% males), low ferritin (17%) and elevated PTH (13%). Weight loss at one year post op was 40 Kg and compliancy with multivitamin supplementation was noted in 80% of patients.

Conclusion: Sleeve gastrectomy results in extensive weight loss at one year postop. Nutritional deficiencies are prevalent among the morbidly obese population prior to bariatric surgery, in particular vitamin D deficiency. Postoperatively some of these deficiencies improve, however others may persist or be exacerbated. Therefore routine nutrition monitoring and supplementation are essential.

OP.118

LAPAROSCOPIC CONVERSION OF SLEEVE GASTRECTOMY TO GASTRIC BYPASS FOR SUPER-OBESITY (BMI≥50KG/M²) AND INCISIONAL HERNIA

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Background : Laparoscopic Sleeve Gastrectomy (LSG) is more and more performed as a stand alone procedure. In case of weight regain, gastric by-pass (GBP) seems to be the revisional procedure of choice. Furthermore, presence of large incisional hernia (IH) could challenge this procedure.

Methods : We present the case of a 30 year old woman (125 kg, 1.55 m) with a body mass index (BMI) of 52.1 kg/m². She was referred to our tertiary care center for weight regain (Nadir 100kg), 4 years after a LSG performed for super-super obesity (BMI=68.7kg/m²). She also had a large epigastric IH on the incision site of her previous Single Site LSG (Diameter = 10 cm).

Results : Laparoscopic conversion of previous LSG to GBP associated with the cure of a large incisional hernia is reported. No adverse outcomes occurred during the post-operative period.

Conclusion: Laparoscopic conversion of previous LSG associated with the cure of a large incisional hernia in a super-obese patient is feasible. Because of high risk of mesh infection, only a fascia raphy could be performed in such situation.

OP.119

GASTRIC MUCOSAL DEVITALIZATION REDUCES FAT MASS AND IMPROVES GLUCOSE AND LIPID METABOLISM IN AN OBESE RAT MODEL

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Background: The gastric mucosa is an endocrine organ that regulates satiation pathways by the expression of orexigenic and anorexigenic hormones. Metabolic surgery, such as vertical sleeve gastrectomy (VSG), excludes gastric mucosa and reduces gastric volume to treat the obesity. Our study aims to investigate the effects of gastric mucosal devitalization on the treatment of obesity.

Methods: Gastric mucosal devitalization (GMD) of 80% of the stomach was achieved by argon plasma coagulation in a high fat diet (HFD) induced obesity rat model, and compared to VSG and sham (SH). In an 8 weeks follow up study, we quantified body weight, visceral and subcutaneous fat content, HOMA-IR, cholesterol- and free fatty acid profile by ELISA. Following a 2h oral glucose tolerance test, the kinetics of ghrelin, GLP-1, and PYY were measured. The liver lipid content and lipase activity were quantified by ELISA and adipophilin expression by western blot analysis.

Results: GMD resulted in a significant reduction in body weight, visceral and subcutaneous adipose tissue as well as improving glucose and lipid metabolism compared to sham. Additionally, there was a significant decline in serum concentrations of the metabolically toxic free fatty acid, palmitate. Liver adipophilin, known to precipitate lipid accumulation and alter glucose metabolism, was significantly reduced by GMD and VSG compared to SH.

Conclusions: For the first time, we demonstrate that devitalizing the gastric mucosa reduces visceral adiposity and improves glucose and lipid metabolism. Therefore, the gastric mucosa deserves further attention as a promising target to treat obesity.

OP.122

EFFICACY OF MGB IN DIFFERENT AGE GROUPS AND DIFFERENT DURATIONS OF DM2

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Background: Mini Gastric Bypass Surgery is gaining popularity because of its results, easy acceptance by the patients, simplicity and safety.

Objective: The aim of study was to find efficacy of MGB in EWL and resolution of DM2 in different age groups having different durations of DM2.

Methods: The study is retrospective analysis of 573 patients, who had undergone MGB from Jan/2007 to Dec/2014 with mean age 48 Years (23-73years). Out of 573 patients, 229(39.96%) were diabetic. 217(94.76%) had DM2. 92(41.92%) were on insulin. 125(54.58%) were females. 5(2.18%) had diabetic Nephropathy.

The minimum duration of diabetes was 6 months and the maximum was 25 years. The mean HbA1c was 8.75% and the minimum Cpeptide was 0.36 and the maximum was 12.49.

Results: The mean EWL was >90%. %EWL was faster in younger age group (23-40 years) for the same length of bypass. DM2 completely resolved in 94% patients (stoppage of anti-diabetic medication) and there was significant improvement in the rest. DM1 patients continued to take insulin but the requirement of exogenous insulin decreased. The resolution of DM2 occurred faster in patients with short duration of DM2 (6 months-5 years).

Conclusions: The quality of life improved in all the patients. MGB results in sustained weight loss and significant improvement in glycemic control leading to clinical resolution or improvement in DM2 and related complications.

OP.125

SEVERE MALNUTRITION AFTER OMEGA LOOP GASTRIC BYPASS (OLGB); SURGICAL MANAGEMENT AND RESULTS.

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Introduction: Malnutrition after OLGB is a rare complication. In presence of hypoalbuminemia (kwashiorkor syndrome) the prognosis is altered with four fold increasing mortality rate.

Objectives: To describe the results of OLGB urgent reversal in case of severe malnutrition syndrome (MS).

Methods: This is a retrospective review of prospectively collected data between 2005 and 2014. Malnutrition after OLGB was determined by the combination of significant weight loss and hypoalbuminemia (albumin <30 g/L) with edema. The criteria indicating the urgent reversion were the failure of medical treatment with the appearance of clinical signs of severe MS.

Results: During the period considered, 2900 OLGB were performed including 1000 after gastric banding failure. Of these, 50 patients (1.7%) developed a severe MS. Several causes of malnutrition were identified: malabsorption syndrome with diarrhea-steatorrhea (68%); marginal ulcers resistant to medical therapy (24%); invalidating bile reflux (30%); anorexia (46%). Twenty-six patients were urgently reversed. The average BMI before reversion was 22.6 kg/m² and the average albumin level of 29.7g/l. The average time between the OLGB and reversion was 20.6 months (7-62). All the reversion procedures were performed laparoscopically. Early postoperative complications requiring reoperation occurred in 6 patients (23%). The postoperative mortality rate was 0% while it was 16.6% in the non-operated patients (4 out 24). All the reversed patients had a complete regression of the MS.

Conclusion: In case of post-OLGB severe malnutrition, resistant to medical treatment, an urgent laparoscopic reversion procedure should be systematically considered.

OP.139

ANASTOMOTIC COMPLICATIONS RATE: COMPARISON BETWEEN ANTECOLIC AND RETROCOLIC LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

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Background: Roux-en-Y gastric bypass procedure is an effective treatment for morbid obesity. Anastomotic leak, marginal ulcers and gastrojejunal strictures are the main anastomotic complications after this procedure.

Objective: The aim of the present retrospective study was to compare the rates of anastomotic complications between the antecolic and retrocolic technique in a large cohort of patients undergoing Roux-en-Y gastric bypass.

Methods: During a 12 year period, 1500 patients underwent laparoscopic Roux-en-Y gastric bypass. The antecolic and the retrocolic technique were used in respectively 572 and 928 consecutive patients. All procedures were performed using a circular stapled gastrojejunostomy and absorbable sutures.

Results: There was no significant difference in demographic characteristics between the 2 groups. Mean time follow-up was 67.5 months. One hundred and twenty one patients (8.1%) developed an anastomotic complication. Two patients in the antecolic group (0.3%) and 1 patient in the retrocolic group (0.1%) presented an anastomotic leak, *non significant*. Thirty-seven patients in the antecolic group (6.5%) and 30 in the retrocolic group (3.2%) developed a marginal ulcer, *p=0.005*. Thirty-seven patients in the antecolic group (6.5%) and 14 in the retrocolic group (1.5%) developed a gastrojejunal stricture, *p< 0.0001*. The mean time to onset of anastomotic complication symptoms after surgery was 5 days (range 5-7) for anastomotic leak, 11 months (range 0.25 -72) for marginal ulcers and 1 month (range 1-3) for gastrojejunal strictures

Conclusion: Patients with an antecolic Roux limb develop significantly more marginal ulcers and gastrojejunal strictures than patients with a retrocolic Roux limb.

OP.149

SHOULD METABOLIC SURGERY BE OFFERED IN MORBIDLY OBESE PATIENTS WITH TYPE I DIABETES?

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Background: Bariatric surgery has recently been endorsed as an effective treatment of Type 2 Diabetes (T2D) in severely obese patients. Little is known about its metabolic effects in Type 1 Diabetes (T1D). The objectives of this study were to assess bariatric surgery outcomes in T1D obese patients who underwent either a Biliopancreatic Diversion (BPD) or a Sleeve Gastrectomy (SG).

Methods: Through retrospective analysis of prospectively collected data, ten patients with T1D (7 BPD, 3 SG) were matched with 20 patients with T2D (14 BPD, 6 SG) according to age, gender, type of surgery, initial Body Mass Index and insulin requirements (1:2 matching). Weight loss, diabetes control, remission of comorbidities were compared.

Results: Mean follow-up was 55.1 months. Mean Excess BMI Loss% tended to be greater in T1D patients compared to T2D (77.1% versus 68.3%, $p=0.14$). The remission and improvement rates of T2D were 55% and 45% versus 0% and 90% for T1D. The remission rate of T2D was significantly greater after BPD (71.43%) compared to SG (16.67%, $p=0.04$). Insulin requirements were significantly reduced in both groups after surgery (T1D: 0.44 ± 0.24 versus 1.09 ± 0.7 units/kg/day, $p=0.03$, T2D: 0.03 ± 0.12 versus 0.89 ± 0.77 units/kg/day, $p=0.0001$). Remission rates of hypertension and dyslipidemia were similar for T1D and T2D (66.7% versus 62.5%, $p=0.63$ and 88.9% versus 75%, $p=0.23$).

Conclusions: Even if metabolic surgery has limited effect on glycemic control in T1D, it improves insulin sensitivity and other comorbidities. It should be considered as a therapeutic option in selected obese patients with metabolic syndrome and high cardiovascular risk.

OP.153

THE EFFICACY OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AFTER PREVIOUS ANTI-REFLUX SURGERY: A SINGLE SURGEON EXPERIENCE.

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Background: In this study we assessed feasibility, weight loss results and recurrence of gastro-oesophageal reflux disease (GERD) in patients undergoing laparoscopic Roux-en-Y Gastric Bypass (RYGB).

Methods: Retrospective analysis of prospectively collected data was performed for patients undergoing laparoscopic RYGB after previous anti-reflux surgery between 1/1/2000 and 1/1/2015. Complications were listed. Weight loss was assessed using %Excess Weight Loss (%EWL) and every patient was compared with two matched control subjects (comparable preoperative BMI, same year of surgery and gender). Telephone interviews were conducted to assess satisfaction and assure maximum follow-up data.

Results: A total of 17 (10 female, 7 male) patients were identified (16 Nissen and 1 former Belsey-Mark IV fundoplication). Open fundoplication was performed in 3 patients (17,6%). Mean time between surgical interventions was 9,4 years. Recurrence of GERD pre-RYGB was seen in 6 patients (35,3%). Laparoscopic RYGB with breakdown of the fundoplication was feasible in all patients without intra-operative complications. Mean in-hospital time was 3 days. One patient needed relaparoscopy for falsely suspected leakage and another suffered from postoperative pneumonia. Symptomatic GERD was reported by 1 patient after RYGB. EWL 1 year after surgery was comparable (77,1 % vs. 79,0% in controls, $P=0,70$). Satisfaction was great: 16 patients (94%) would repeat the conversion.

Conclusions: Laparoscopic conversion of anti-reflux surgery to RYGB with breakdown of the fundoplication is feasible and safe. Weight loss results are equal to control subjects and treatment of GERD is excellent.

OP.158

ARE MULTIPLE INTERVENTIONS THE SOLUTION TO FAILURE OF BARIATRIC SURGERY?

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Introduction: Obesity is a growing medical and socioeconomic problem. With all this evolution in bariatric surgery, there has been a trend by bariatric specialists to operate the morbidly obese patient more than once using different types of bariatric surgeries.

Objectives: We present a retrospective descriptive study of 10 patients who were operated with a gastric band (GB) followed by a sleeve gastrectomy (SG) then by a Roux en Y gastric Bypass (RYGBP).

Methods: We analyzed the data collected between 2000 and 2014 on all patients undergoing consecutively these 3 types of interventions.

Results: The SG after the GB has not improved sufficiently and significantly the weight loss, as the percentage of excess weight loss (EWL) averaged 25.5 %. After RYGBP, the overall %EWL reached 66.9 %.

The succession of two restrictive techniques does not provide a meaningful weight loss, while a conversion to a mixed surgery improves the outcome overall, but does not provide comparable results to a RYGBP done as a primary intervention. The etiology of weight regainers remains unknown.

Conclusion: The long term follow up of bariatric surgery highlights an increased failure rate of these interventions: a second or third operation is becoming more frequent. Careful patient selection and informed consent should be obtained as redo interventions are challenging and more prone to complications.

OP.170

SLEEVE GASTRECTOMY- STANDARDIZATION OF TECHNIQUE AT A TEACHING INSTITUTE

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Background: For any procedure to be reproducible with minimum complications, it has to be standardized. It is specially important when the procedures are done in a teaching institute, or else lack of it leads to confusion[1]. In this video we demonstrate three port Laparoscopic Sleeve gastrectomy with marking.

Surgical Method: We perform a three port Laparoscopic Sleeve gastrectomy with additional liver retraction aided with Jackson Pratt drain as seen in the video. In this method once the gastrotomy is done we insert a 38 French Orogastric tube for calibration and mark the entire pathway for transaction. The marking begins 4 cms from the pylorus proceeding upward keeping at least 2 centimeters from the incisura and close to the Orogastric tube at the body of stomach. Near the Gastroesophageal junction the line is marked away from the fat pad.

Results: On analysis of the outcome of this technique we compared the results of Sleeve gastrectomy before and after marking. Total 681 sleeve gastrectomies have been done till September 2014 in Our institute. The method of marking was started since July 2012. On analysis of the initial 263 cases prior to marking, the stricture and leak rate was 1.90% and 1.14% respectively, while subsequently in the remaining 418 cases the stricture and leak rate was 0.47% and 0.71% respectively. (p<0.05)

Conclusion: We advocate standardization of Sleeve technique and marking as a means to reduce the stricture and leak rate.

OP.185

THE BILIOPANCREATIC DIVERSION AND BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH AS SECOND PROCEDURE AFTER PRIMARY RESTRICTIVE BARIATRIC SURGERY

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Introduction: In the past restrictive bariatric procedures were performed in large numbers worldwide. However, on the long-term some of these procedures can be considered as a failure. This is mostly due to weight regain. Adding malabsorption seems logic in these cases. This study evaluates the effects of a biliopancreatic diversion (BPD) and BPD with duodenal switch (BPD-DS) as secondary procedure after failed primary restrictive procedure.

Methods: Data from all patients who underwent a laparoscopic BPD or BPD-DS after primary restrictive bariatric surgery were retrospectively analyzed. Data on weight, co-morbidities, complications, and quality of life (QOL) were obtained.

Results: 50 patients were included. Main indications for secondary bariatric surgery were inadequate weight loss, weight regain, refractory co-morbidities and band migration. After a mean follow-up of 34 months an excess weight loss of 64% was achieved (56% for BPD and 72% for BPD-DS respectively). Complete remission of type 2 diabetes mellitus was achieved in 15 out of 17 patients ($p=0.004$). Short-term complications occurred in 10 (20%) patients. On the Bariatric Analysis and Reporting Outcome Scale (BAROS), only 10% of the included patients could be considered as “failure”.

Conclusion: We believe that conversional bariatric surgery of a primary restrictive bariatric procedure to a BPD or BPD-DS can be performed laparoscopically in most patients with excellent outcomes regarding weight loss, reduction of obesity related co-morbidities, and QOL.

OP.208

LONGTERM EFFECT OF METABOLIC SURGERY FOR THE TREATMENT OF DIABETES — A MATCHED COMPARISON WITH MEDICAL TREATMENT

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Background: It has been well recognized that metabolic surgery has short-term benefits for mildly obese patients with type 2 diabetes mellitus (T2DM), but how long these effects can be sustained is uncertain.

Methods: This was a retrospective cohort study comparing long-term outcomes for mildly obese T2DM patients receiving metabolic surgery (n=52) versus medical treatment (n=299). The surgical group received standard sleeve (n=19) or bypass (n=33) procedures in a regional hospital. The medical group, selected from a nationwide community cohort, was matched with the surgical group by age, BMI, and diabetes duration. We defined prolong complete and partial remission as HbA1c < 6% and 6-6.5%, respectively, for those who were exempted from any anti-diabetic drugs for five years.

Results: At the end of the fifth year, the surgical group had a mean weight loss of 21.0% (from 31.0 to 24.5 kg/m²), HbA1c decreased from 9.1% to 6.3%, 18 (36%) complete remission, 14 (28%) partial remission, 1 (1.9%) death, and 1 (1.9%) end-stage renal disease (ESRD). The medical group had 3 (1.2%) complete remissions, 4 (1.6%) partial remissions, 9 (3.0%) deaths, and 2 (0.7%) ESRDs; their HbA1c remained around 8%, and BMI also stayed similar during the follow-up period. The mortality rate and ESRD incidence were not significantly different in these two comparison groups.

Conclusions: For mildly obese T2DM patients, the improvement in glycemic control of metabolic surgery last for at least 5 years. However, the survival benefit and lifelong adverse outcomes require more than five years to be established.

OP.216

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) LIFESPAN AND WEIGHT LOSS AT TEN YEARS OF FOLLOW-UP.

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Introduction: During the last years in France the number of LAGB placed is gradually decreasing while the number of ablation is increasing.

Objective: To determine the LAGB lifespan and outcomes with a minimum follow-up of 10 years.

Methods: This is a retrospective review of our prospectively collected data of obese patients who had a LAGB between January 1998 and December 2004. LAGB lifespan was assessed using Kaplan-Meier curves.

Results: During the period considered, 301 patients underwent to a LAGB. The percentage of patients who completed the follow-up at 5, 10 and 15 years postoperatively was 85%, 77.2% and 75.8% respectively. The banding was removed in the 28.2%, 35% and 36.4% of patients respectively at 5, 10 and 15 postoperative years (poy). A conversion to other procedures was performed in the 22.9% of patients. The mean preoperative body mass index (BMI) dropped from 44.6 kg/m² to 36.7 kg/m², 36.3 kg/m², and 34.7 kg/m² respectively at 5, 10 and 15-poy. The mean percentage of excess weight loss (%EWL) at 5, 10 and 15-poy was 39.7%, 39.5%, and 36.1% respectively. The LAGB failure rate was 45.8% and 48.5% at 5 and 10-poy.

Conclusion: Despite the encouraging short-term results, only one third of LAGB patients maintain acceptable weight loss at 10-poy. With a long-term failure rate of about 40%, the sustainability of LAGB in the treatment of a chronic disease such as obesity, it is seriously questioned.

OP.234

IS THE GASTRIC BAND STILL THE IDEAL RESTRICTIVE BARIATRIC PROCEDURE?

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Introduction: Gastric Band remains once more the most common bariatric restrictive procedure performed in the world, although it seems to have a slow trend away due to its long term complications and moreover new procedures, like sleeve gastrectomy, are gaining wide acceptance. The outcomes after LAGB are not casual, but the result of a well planned bariatric activity: correct laparoscopic technique, experienced surgical team, well-engineered device and scrupulous long-term follow-up. The purpose of the study is to access that performing this operation in high volume centers and using some surgical tricks, we can reach significant results in weight loss and reduction of complications.

Method: From 2002 to 2014, 3581 patients underwent LAGB placements (Heliogast® System). Procedures were rigorously performed by two surgical teams: "two-step" technique, band fixation and the rigorous follow up.

Results: Data on patient demographics, operative variables and postoperative outcomes were collected prospectively and reviewed retrospectively. The results were evaluated according to mortality, early and late complications, EWL%, BMI, conversion to open surgery, percentage of follow up. Preoperative BMI was 42,3 for male and 41.5 for female respectively. No deaths. Conversion rate: 3(0,08%), local impediment 2 (0,05%), slippage 167(4,66%), band erosion 14(0,39%), trocar hernia 31(0,86%), port disconnection or leaking 49(1,36%), poor weight loss 252(7,03%), band removal for psychological intolerance 25(0,69%). Follow up 74 % at 7 years. Mean EWL at 7 years: 53,7% for female, 51.5% for male.

Conclusion: The LAGB is associated with inferior weight loss, when compared to other bariatric operations, but is unquestionably associated with less early complications. The long term outcomes, instead, are strictly related to patients motivation and correct patients selection. We believe that combining some basic technical tricks, we can achieve and maintain EWL>53%, with an acceptable rate of complications.

OP.239

INITIAL EXPERIENCES OF LAPAROSCOPIC GASTRIC GREATER CURVATURE PPLICATION (LGGCP) – A REVIEW OF 64 CASES

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Background: Laparoscopic gastric greater curvature plication (LGGCP) is an emerging, alternative form of restrictive surgery. We present our experiences of LGGCP with primary focus on surgical techniques and weight loss. In addition, an investigation was performed on the food tolerance after LGGCP.

Methods: This study was conducted by retrospectively reviewing the prospectively collected data of patients that underwent LGGCP from March 2013 to February 2015.

Results: Sixty-four patients were eligible for the study and 59 (92.2%) were female. Mean (range) patient age was 34 (21~49) years, mean (\pm SD) preoperative BMI was 31.4(\pm 4.3) (25.2 to 48.0) kg/m², and there were no mortalities or postoperative complications. Immediate postoperative nausea and vomiting occurred in 58/64 patients (90.6%), mean postoperative hospital stay duration was 2.3 days (range, 1~7 days), and mean % EBMIls at 1, 3, 6, 12, and 18 months was 34.7%(n=64), 50.8%(n=60), 61.1%(n=40), 82.1%(n=19), and 82.9%(n=12), respectively. Follow-up endoscopy was performed at 12 months postoperatively in 19 patients, and reflux esophagitis of grade LA-M was observed in 16 (84.2 %), LA-A in 2 (10.5%), and LA-B in one patient (5.3%). Mean \pm SD satisfaction score with current eating and total food tolerance score was 4.27 \pm 0.55 and 20.95 \pm 4.30, respectively.

Conclusions: LGGCP is an intervention that may be comparable with sleeve gastrectomy or adjustable gastric banding especially for Class I, II obesity in Asian population. No major complication specific for LGGCP was observed during the follow-up period up to 18 months. Furthermore, quality of eating, as determined using food tolerance scores, was excellent.

OP.242**PRELIMINARY RESULTS OF ADDING GASTRIC PPLICATION FOR PATIENTS WITH IMPENDING GASTRIC BAND FAILURE****Seong Min Kim**, Su Bin Kim*Department of Surgery, Gil Medical Center, Gachon University of Medicine and Science, Incheon, Republic of Korea*

Background: Small percentage of patients fitted with gastric band still has shown ‘long-term failure’ due to various reasons. We have demonstrated the safety and feasibility of a technique, band preserving-laparoscopic gastric plication (BP-LGP), designed to improve the weight loss effect and decrease gastric band adjustment frequency, thereby improving general QoL of patients.

Methods: All have had gastric band more than 1 year (1.6 ~ 4.2 years). The indication of BP-LGP was chronic gastric prolapse in two patients (2/6, 33.3%), pouch-esophageal dilatation in three (3/6, 50.0%), insufficient weight loss in four (4/6, 66.6% including two patients who showed %EBMIL < 30% with gastric band at revision). The procedure consisted of as follows: 1) disconnection of band and port system, 2) laparoscopic nondestructive removal of own band, 3) repair of hiatal widening if necessary, 4) gastric plication. 5) reinsertion of own band in proper position, 6) band fixation with phrenogastric sutures 7) reconnection of band and port system.

Results: A total of 6 patients consecutively underwent surgery. There was neither perioperative complication nor mortality. The median follow-up after revision was 7.3 months. All showed weight loss and resolution of their troublesome signs and symptoms. The median fill volume before revision was 6.1 cc (range, 2.7 ~ 11.0 cc), and the median fill volume after revision was 0.3 cc (range, 0.3~5.3 cc). Three patients (3/6, 50%) still have empty band at last follow-up

Conclusions: This novel method of bariatric revision might have a role as salvage procedure for patients who have experienced impending gastric band failure.

OP.246**OUTCOMES OF REVISIONAL LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS (LRYGB) AFTER FAILED RESTRICTIVE PROCEDURES IN SINGLE STAGE IS INFERIOR TO PRIMARY LRYGB****A Nimeri**, MK Ibrahim, E. Salim, A Maasher, M Al Hadad, A Mihchieh,*Bariatric & Metabolic Institute (BMI) Abu Dhabi, Department of Surgery Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates.*

Background: Weight recidivism is not uncommon after restrictive bariatric surgeries including laparoscopic adjustable gastric band (LAGB), vertical banded gastroplasty (VBG) and laparoscopic sleeve gastrectomy (LSG). Theoretically if a patient fails a restrictive bariatric procedure, then conversion to another restrictive procedure is not the best strategy. We present herein our experience in converting failed restrictive bariatric procedures to LRYGB compared to our primary LRYGB series.

Methods: We reviewed our prospectively maintained database for all LRYGB following a failed restrictive procedure and our primary LRYGB performed from September 2009-2014. IRB approval was obtained. We matched revisional RYGB cases with primary RYGB for gender, age and BMI. We excluded any revisional RYGB cases not done for weight recidivism.

Results: A total of 720 bariatric procedures were performed including 65 revisional LRYGB and 354 primary LRYGB cases. After matching we were left with 62 revisional and 73 primary RYGB cases. Revisional LRYGB included 44, 9, 7 and 2 cases of conversion of a failed LAGB, LSG, VBG and MGB respectively. Mean preoperative BMI was 47 kg/m² +/-SD for revision LRYGB and 47 kg/m² +/-SD for matched primary LRYGB group. Mortality rate in the entire series was 0%. Leak rate in revisional and primary LRYGB was 3% and 0.8% respectively. Rate of DVT/PE & portal vein thrombosis was 0% in revisional LRYGB and 0.3% and 0.6% in primary LRYGB. Bleeding requiring blood transfusion or re operation in revisional LRYGB was 0% and in primary LRYGB was 0.6% and 0.6%. Stenosis rate in revisional and primary LRYGB was 1.5% and 0.4% respectively. Pneumonia and UTI rates in revisional LRYGB were 0% and in primary LRYGB was 0.3% and 0.3% respectively. Readmission in revisional and primary LRYGB was 7.7% and 2.8% respectively. The excess weight loss (EWL) at two years for our revision and matched primary LRYGB were 62% and 68% respectively.

Conclusion: Our data suggest that revision of failed restrictive procedures to LRYGB is safe and effective but has more complications a lower Excess weight loss at 2 years compared to primary LRYGB.

OP.248**THE "RE-SLEEVE-OPERATION"****Rainer Brydniak***Schwarzwald-Baar-Klinikum*

Bariatric surgery is expanding all over the world, as morbid obesity is becoming a more and more expected disease. Bariatric surgery is no longer only performed in high-volume centers, but also in small hospitals all over the world, with smaller experience in bariatric surgery.

The sleeve-gastrectomy is a procedure which might be falsely regarded as an easy operation, and it is therefore often performed by beginners to treat morbid obesity. One typical mistake in the initial sleeve-gastrectomy-operation is the incomplete resection of the dorsal fundus, leaving a too big reservoir, and therefore leading to bad mid- and longterm results of weight-loss.

One therapeutic possibility in these cases can be a so called “Re-Sleeve-Operation” to initiate a restriction the patient never really had. This video shows one of these typical cases with a left-over fundus. It demonstrates step-by-step the preparation and the resection of the left-over-fundus and the amount of resected volume, to show how much potential lies in this re-do-operation.

OP.251

POST SCOPINARO INTERNAL HERNIA

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Introduction: Scopinaro biliopancreatic diversion has been shown to be an effective treatment for morbid obesity, both in terms of weight loss and improvement in multiple co-morbidities. While the laparoscopic approach offers many advantages to the patient, certain complications of this operation continue to pose difficult clinical problems as the number of procedures performed increases.

One such complication is internal hernia through one of the mesenteric defects, which can result in small bowel obstruction, ischemia, or infarction and often requires reoperation. Careful attention must be paid to individual surgical techniques in order to prevent this potentially devastating complication, internal hernia should be always one of the differential diagnosis of acute abdomen specially after bariatric surgery based on high index of suspicion once diagnosis is made management should be prompt and precise to avoid disasters that might have high morbidity and mortality.

Aim of the study: To evaluate the incidence and the way of management at king abdulaziz hospital

Material: Retrospective review of 816 patients underwent Scopinaro biliopancreatic diversion

Results: Between(2006-2013) 816 patient were operated upon with BPD ,five patient developed internal hernia, two patient was managed laparoscopically with reduction of hernia ,three patients were opened through laparotomy, two of them required bowel resection ansatmosis due to gangrenous bowel, no mortality among our patient with internal hernia.

Conclusion: Complications after biliopancreatic diversion are unavoidable but disasters are often avoidable.Surgeon must be very suspicion of internal hernia post operatively irrespective of the interval after surgery.with early involvement of a Bariatric Surgeon, internal hernia Can be managed safely with laparoscopy.

OP.272

SLEEVE GASTRECTOMY AS A REDO PROCEDURE FOR FAILED PRIMARY SLEEVE GASTRECTOMY

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Background: Laparoscopic sleeve gastrectomy (LSG) has gained popularity and world wide spread as a sole definitive obesity restrictive procedure. Short-term follow- up showed excellent successful results in weight reduction. Failure of weight loss and severe reflux are the main problems encountered in long term follow-up requiring a redo operation in some cases such as gastric bypass , duodenal switch operation or re-sleeve gastrectomy (ReSG).

Methods: In a period of 3 years from February 2011 to February 2014, 21 cases of Revisional bariatric operations were done in our department (Obesity unit, El Demerdash Hospital , Ain Shams University), after primary sleeve gastrectomy. The indications for the redo operations were insufficient weight loss (8 cases), weight regain after initial weight loss (9 cases), intractable reflux symptoms (4 cases). All these cases were not operated primarily in our center.

Results: Conversion to RYGP were performed in 10 cases (3 patients with reflux Symptoms,3 patients with insufficient weight loss and 4 patients with weight regain after initial weight loss) . After eliminating all other contributive factors, the decision for Re-sleeve gastrectomy was taken for 11 patients. Preoperative dye studies showed redundant fundus (7 cases) or dilated gastric tube (4cases). These findings were confirmed intra-operatively and Re-sleeve gastrectomy were completed by excision of the excessive redundant fundus in (7 cases) and by re-sleeve over acalibrating 36 F tube (4cases)

Mean operative time was 65 min (range 46 - 116min). No intra-operative bleeding. There was no mortality and only one postoperative bleeding which was managed conservatively without re-operation. One year follow up of these 11 patients showed successful weight reduction in all cases. Two patients got reflux symptoms but controlled with medications.

Conclusions: ReSG is an effective surgical approach when the weight regain or insufficient weight loss is due to large gastric pouch or dilated gastric tube after the original LSG. Further prospective clinical trials are awaited as well as long-term results to compare the outcomes of ReSG with other Redo operations as RYGB or duodenal switch after primary LSG

OP.280

LONG-TERM RESULTS AFTER REVISIONS OF FAILED PRIMARY VERTICAL BANDED GASTROPLASTY

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Background: Vertical banded gastroplasty (VBG) was a popular restrictive bariatric procedure however, has been abandoned due to a high long-term complications rate in many cases leading to the necessitation of revisional surgery. As a number of these revisions can be expected, this study reports and compares the results after revision of the primary VBG (Re-VBG), conversion to sleeve gastrectomy (cSG) and conversion to Roux-en-Y gastric bypass (cRYGB).

Methods: In this retrospective single-center study, all patients with a failed VBG who underwent revisional surgery were included. Medical charts were reviewed and additional postal questionnaires were sent to update follow-up.

Results: A total 152 patients were included in this study, of which 21 underwent Re-VBG, 16 underwent cSG and 115 patients underwent cRYGB. 16 patients necessitated a second revisional procedure. No patients were lost-to-follow-up. Two patients deceased during the follow-up period, 23 patients did not return the questionnaire. Main reasons for revision were dysphagia/vomiting, weight regain and insufficient weight loss. Excess weight loss (%EWL) after Re-VBG, cSG and cRYGB was, respectively, 45%, 57% and 72%. Eighteen patients (11.8%) reported postoperative complications and 27% reported long-term complaints.

Conclusions: In terms of additional weight loss, postoperative complaints and reintervention rate, Roux-en-Y gastric bypass seems feasible as a revision for a failed VBG. Furthermore, the high number of complications after VBG and complications due to revisional procedures underline that VBG should be excluded as a primary option in bariatric surgery and other restrictive should be considered instead.

OP.293

REVISIONAL GASTRIC BYPASS. INITIAL EXPERIENCE FROM A UK REFERRAL CENTRE

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Introduction: Revisional surgery constitutes a challenging but essential part of modern bariatric practice. Laparoscopic Gastric By-Pass (LGBP) is the most popular revisional bariatric procedure. The aim of this study was to evaluate its efficacy, safety and post-operative quality of life (QOL) after previous bariatric procedure.

Methods: We performed a retrospective analysis of all our patients who underwent LGBP as one-stage revision after failed or complicated primary bariatric procedure. Indications, peri-operative data and QOL were recorded. Weight loss and co-morbidity data were recorded. QOL was assessed using the Moorehead-Ardelt II (MAII) questionnaire. Values are expressed as median (range).

Results: Between May 2013 and December 2014, a total of 17 patients, age 43.0(26.0-57.0) years underwent revisional LGBP. The time interval since the primary operation was 5.0(3.0-26.0) years. The primary operations included Gastric Banding (n=10), Sleeve Gastrectomy(n=4) and Vertical Gastroplasty(n=3). Indications for revision were: band slippage (n=3), oesophageal dysmotility(n=2), band intolerance(n=1), weight-loss failure(n=9) and non-resolution of diabetes(n=2). No mortality or major complications were recorded. BMI prior to primary procedure was 56.7(40.0-87.5) kg/m². Maximum %excess BMI loss following primary procedure was 41.3(18.9-93.0) before dropping to a lowest of 17.4(-12.4-92.4) before the conversion. It increased to 46.4(26.9-76.2), at 8.0(1.0-22.0) months following LGBP. Post-revisional MAII score at that time-point was 1.2(-1.6-2.5), indicating “good QOL”.

Conclusion: LGBP is a safe and effective revisional bariatric operation that achieves weight-loss and offers a “good QOL” outcome. A larger sample of patients is required to safely conclude on the metabolic impact of revisional surgery and the related effect on QOL.

OP.299

NOVEL LAPAROSCOPIC REVERSABLE GASTRIC BAYPASS WITH FUNDECTOMY AND ESPLORABLE STOMACH (LRYGBP fes)

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Background: Most bariatric surgeons consider the standard gastric bay-pass the ideal procedure for treating severe obesity. The remnant stomach cannot be explored without any opportunity to diagnose and treat diseases of the stomach, duodenum and main bile duct. The model is based on the use of a device that allows the stomach to be isolated from the passage of the food bolus, but also to be still examinable by endoscopy, with diagnostic and operative possibilities.

Technique: This procedure is done with 5 trocars. The 36 F. bougie is introduced in the stomach, the application of linear stapler-cutter device beginning in the greater curvature from the Bouchet area to the lesser curvature 6 cm from the cardias. Four stapler firing parallel to the bougie is applied to make the pouch 3x5 cm. The jejunum is pulled towards the gastric pouch in antecolic position whit gastro-jejunal anastomosis of 3 cm A PTFE band 1mm thick is placed, 6 cm from the cardia, to gently close the end of the pouch. Results: 453 patients BMI 48.2 were operated from January 2007 to-June 2014. Mean operative time was 152 m.

Conclusions: The Reversible LRYGBP(fes) has the same results as of standard, but permits exploration of the remnant stomach. The removal of the gastric fundus, leads to a marked decrease in ghrelin and to an increase in PYY and GLP-1.. The LRYGBP(fse) can provide reversibility, simply, by laparoscopically cutting the band.

OP.304

MEDIUM AND LONG TERM RESULTS OF GASTRIC BANDING: OUTCOMES FROM A LARGE PRIVATE CLINIC IN UK

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Background: LAGB continues to be a popular bariatric procedure in the UK, especially in the private healthcare sector. Private clinic data is generally of lower quality. We present long term data from a large private weight loss provider in the UK.

Methods: 2356 primary gastric band procedures were performed between 2004 and 2014. Data is reported for patients who had completed 3 years of follow up. Clinic follow-up was for 2 years with email questionnaires and telephone consultation after 3 years.

Results: 1397 patients had completed over 36 months of follow up. 1274 patients did not have any complications or required re-operations. Their mean preoperative weight and BMI were 110.56±22.56 kg and 39.70±6.81 kg/m² respectively. The mean excess % BMI loss at 1 year, 2 years, 3 years, and 5 years was 43.97±27.4, 51.8±37.41, 49.7±36.88, 52.6 ±41.74 respectively.

123 (8.8%) patients who had completed at least 3 years of follow up and had a complication. 43 (2.5%) patients underwent conversion an alternative bariatric procedure, 32 (2.3%) patients underwent band revisional surgery for a band related complications, 21 (1.5%) patients had port related complications and 17 patients underwent band removal without further weight loss surgery. There were no mortalities.

Conclusions: Gastric banding in the private sector is a safe procedure. Good follow-up here demonstrates comparable outcomes with regards to weight loss in comparison to contemporary data from other banding, sleeve and bypass studies.

OP.310

EARLY EXPERIENCE OF METABOLIC SURGERY IN IRAQ

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Background: Laparoscopic sleeve gastrectomy LSG is known to be a highly effective treatment for morbid obesity and many related condition including type 2 diabetes mellitus (T2DM) and the metabolic syndrome.

Objectives: To assess the effectiveness of (LSG) on glucose homeostasis in morbidly obese diabetic patients and it shows early experience o metabolic surgery in Iraq.

Methods: Prospective clinical case series study conducted in Al-Jumhoori Teaching Hospital and involved 20 patients (17 females and 3 males);their age (22-54 average 37 years) underwent LSG and the level of glucose evaluated at different times by measuring fasting blood glucose level, glycated hemoglobin (HbA1C).

Results: The initial body weight 70-142(110Kg); BMI 31.8-53.9 (45.16Kg/m²); two patients with diabetes mellitus and BMI less than 35Kg/m² involved. The mean level of fasting blood glucose assessed and found to be (202,165,130,107,96 mg/dl) in preoperative ,one-day postoperative,10 days, three and six-months interval; while the level of HbA1C were(10.2,9,7,2,6.1) in the preoperative ,10 days,3 and 6 months interval respectively.

Conclusion: LSG is an effective procedure to decrease weight for morbid obesity and it resolve T2DM in 90% while improvement of T2DM occurred in 10% so LSG is an effective procedure to treat T2DM and the level of glucose declined significantly started from early postoperative and continued till 6 months.

OP.313

SLEEVE GASTRECTOMY IN IRAQ IS A GREAT CHALLENGE

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Background: Laparoscopic Sleeve gastrectomy (LSG) is the most common restrictive procedure performed worldwide for treatment of morbid obesity.

Objectives: To assess the safety, effectiveness and complications of LSG in morbid obese Iraqi patients and the challenge of performing LSG in military conflict regions.

Methods: Prospective clinical case series study conducted in Al-Jumhoori Teaching Hospital and involved 70patients (57females and 13males); their age (19-59 average 37 years) underwent LSG (6 open ,64 laparoscopically with one conversion); 51 patients finish 1 year follow up and only 7 cases performed after the conflict.

Results: The initial body weight 70-195(122Kg); BMI 31.8-65.9 (50.16Kg/m²); two patients with diabetes mellitus and BMI less than 35Kg/m² involved.

The average weight loss assessed and found to be (13.85, 24.1, 32.8, 40.8 and 48.3 Kg) in 1st, 3rd, 6th, 12th month interval; The BMI reduced from 50.16 to 35.43 and 29.52 at 6th and 12th months.

We recorded 1 mortality after 10 days (massive pulmonary embolism), 1 case converted to open and minigastric bypass due to narrowing of the sleeve part.

The associated comorbidities improved after weight loss, and the quality of life improved in 88% of patients depending on bariatric analysis and reporting outcome systems (BAROS).

Conclusion: Sleeve gastrectomy is relatively safe and effective procedure to decrease weight for morbid obesity and it improves the quality of life, but all bariatric procedures needs good health resources and settled countries which were not present in Iraq for the time being.

OP.316

LATE COMPLICATIONS AFTER SLEEVE GASTRECTOM (SG). EXPERIENCE FROM A GERMAN CENTER OF EXCELLENCE.

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Introduction: SG is a common obesity procedure. However, its complications may be life threatening.

Objectives: To display our management for late complications after LSG. The term (late) refers to complications encountered past the 5th post-operative day (i.e.: after hospital discharge)

Methods: Retrospective analysis of data of patients having those complications.

Results: 50 patients (33 F, 17 M), with a mean age of 51 (20-67) years and a mean BMI of 47.1 (38-66.6) Kg/m² had late complications after LSG. 25 patients were primarily operated in our clinic. Intra-operatively, 19 patients (38%) had staple line reinforcement. 25 patients (50%) developed only late leakage. 12 patients (24%) developed only sleeve stenosis. 1 patient (2%) developed only late bleeding. 12 patients (24%) developed mixed late complications (9 patients developed mixed leak and stenosis, 2 developed leak and bleeding, 1 developed bleeding and stenosis). Treatment included conversion in RYGB (20 patients), laparoscopic drainage (10 patients), endoscopic stenting (8 patients), drainage and stenting (5 patients), adhesiolysis (2 patients), oesophagojejunostomy (2 patients), open drainage only (1 patient), seromyotomy (1 patient), and CT guided drainage (1 patient). Complications of treatment included leakage (5 patients), adhesive intestinal obstruction (1 patient), oesophagobronchial fistula (1 patient) and stomal stenosis (1 patient). All complications were managed except the patient with oesophagobronchial fistula (planned for distal lobectomy and oesophagojejunostomy). Follow-up reached up to 45 months.

Conclusion: LSG is widely performed, but its complications should be managed by experienced personnel.

OP.324

10 YEAR OUTCOMES OF TYPE 2 DIABETES MELLITUS AFTER ROUX-EN-Y GASTRIC BYPASS: A SINGLE SURGEON EXPERIENCE IN 140 PATIENTS

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Background: Aim of this study is to assess significant long term impact of Roux-en-Y Gastric Bypass (RYGB) on diabetes mellitus type 2 (DMtII) regarding need for antidiabetic drugs (ADs), biochemical response and associated weight loss.

Methods: Retrospective analysis of prospectively collected data was performed for patients suffering from DMtII (WHO criteria) who underwent Roux-en-Y Gastric Bypass (RYGB) between 1/1/2000 and 1/1/2014. Patients were divided into 2 groups according to preoperative need: insulin-dependent (ID-group) and none-insulin dependent (NID-group). Study parameters included Body Mass Index (BMI), %Excess Weight Loss (%EWL), Hemoglobine A1c (HbA1c) and fasting glucose at 1, 3, 6 and 10 year intervals after surgery. Interpretation of continuous data was performed using the F-test.

Results: 140 patients (97 women, 43 men) were included. Mean preoperative BMI was 43kg/m². Mean duration of diabetes before surgery was 5,7 years (range 0,2-30). Preoperative need for medication was seen in 102 patients (72,8%) of which 49 (48,0%) were insulin dependent (ID-group). Mean follow-up was 5,9 years (range 0,1-14,5). Resolution of DMtII (off insulin/oral antidiabetics, HbA1C < 7,0% and/or fasting glucose <126mg/dl) was present in both groups: 46,7%, 48,1%, 45,0%, 50% (ID-group) and 59,1%, 62,2%, 53,3%, 33,3% (NID-group) at respectively 1, 3, 6 and 10 years follow-up. No significant correlation was proven between resolution of diabetes and %EWL.

Conclusions: Analysis of ADs and biochemical response over time showed a long term positive effect of RYGB on DMtII.

OP.328

INTUSSUSCEPTION AFTER ROUX-N Y SURGERY: AN UPDATE

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Background: Intussusception (int.) and specifically retrograde (RINT) has been reported with roux-n- y anatomy. Our group reported our experience with 23 patients in 2007. We now have experience with over 72 patients who were diagnosed with int. This is the largest single center experience.

Method: We identified 72 patients with int. treated in our practice. We collected data to identify presentation, surgical finding, treatments and initial outcomes in order to gain a consensus on an approach to treating this problem.

Results: We identified 72 pt. with Int. Of these pt. 71 had roux-n-y gastric bypass, one a roux-n-y hepatojejunostomy. There were 68 females and 4 males. One pt. with an ante grade int. at the jejunojejunostomy (jj) and one pt. with a gastrojejunno int. At surgery 51.5% (37 pt.) had spontaneously reduced, 18 % (13 pt.) the int. were surgically reduced, 30.5% (22 pt.) were unreducible. 4 (5.5%) patients were treated by simple reduction of the Int., 3 of 4 (75%) recurred, the one that did not was the pt. with an ante grade int. 11 (15.3%) patients were treated by plication, 9 of 11 (82%) had recurrent pain require reoperation and resection. 57 patients (79.2%) had resection and revision of the jj, 12 patients (21%) had either documented recurrent RINT (4 pt) or recurrence of their RINT pain (8 pt).

Conclusion: We feel justified on continuing our policy of resecting the jj as the initial treatment of RINT.

OP.338

CHANGE OF INTESTINAL HORMONE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY WITH DUODENAL JEJUNAL BYPASS FOR LOW BMI T2DM PATIENTS

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Background: Laparoscopic Sleeve gastrectomy with Duodenojejunal bypass (LSG/DJB) reveals better outcome for morbid obese T2DM patients than Sleeve gastrectomy alone. We also reported good outcome of LSD/DJB for low BMI (BMI<35) but hormonal change after LSG/DJB are still unclear.

Methods: Sixty six low BMI patients (m: 37, f:29) with T2DM underwent LSG/DJB from 09/2007 to 12/2014. 37 of them were followed up at least 1 year after surgery
Average BMI, BW at the time of surgery was 31.7kg/m², 88.4kg. Average HbA1C at the first visit was 9.1%, average duration of DM was 8.7years and 89% of them had used insulin before surgery. Change of parameters with meal tolerance test, including Active GLP-1, insulin, C-peptide, GIP, Oxytomodulin, PYY, proinsulin, glucagon and HOMA-R were checked pre and 3 months postoperatively

Results: Average BMI, BW, HbA1C at 1 year after surgery was 23.7, 66.1kg, 6.3%. Remission of T2DM was 56% and HbA1c<7% was 74%. Pre and postoperative AUC of active GLP-1, insulin, C-peptide, GIP, Oxytomodulin, PYY, proinsulin, glucagon was pre:667/post:2302pM, 28.09/50.19, 2.42/4.07, 54403/53054, 0.27/1.97, 0.21/0.77, 23.28/27.29 18.65/23.60, respectively. HOMA-R changes from 9.9+/-6.8 to 2.3+/-3.2 Active GLP-1, C-peptide, Oxytomodulin, PYY and HOMA-R were significantly different between pre and postoperative.

Conclusions : LSG/DJB showed significant change of DM related factors and this procedure is thought to be an effective treatment for Low BMI T2DM patients.

OP.343

FEW HINTS ON LAPAROSCOPIC SLEEVE GASTRECTOMY TECHNIQUE. LESSONS LEARNED AFTER 1000 PROCEDURES

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Background: Although Laparoscopic Sleeve Gastrectomy (LSG) has emerged as a primary weight loss procedure, certain aspects of the operative technique are still evolving. The aim of this paper is to introduce technical tips learned after over 1000 procedures by the author. These techniques resulted in reduced peri-operative complications.

Methods: Highlights include minimizing port scarring, the approach to fundus and posterior gastric artery, transaction near or at the pylorus, incorporation of tight linear reloads, clips over staple-line and over feeding arteries to reduce postoperative bleeding, sleeve twist and fixation sutures, and the management of gastric content spillage.

Results: Since the full integration of these methods in the last 200 cases, aesthetic outcome has improved and post-operative bleeding has been reduced from 5% to 2%. Leak rate remained at 0.5% and no deaths occurred.

Conclusions: The described suggestions are safe, reproducible and reduce the author's LSG complications to a minimum.

OP.349

GENDER-SPECIFIC ASPECTS IN OBESITY AND METABOLIC SURGERY – ANALYSIS OF DATA FROM THE GERMAN BARIATRIC SURGERY REGISTRY

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Background: The current situation in obesity and metabolic surgery since January 2005 has been investigated with the help of the quality assurance study on surgical therapy for obesity = German Bariatric Surgery Registry (GBSR). The data were acquired and analyzed in cooperation with the Institute for Quality Assurance in Surgical Medicine at the Otto-von-Guericke University.

Methods: Data acquisition was done with the help of an online database. On a voluntary basis, all obesity and metabolic surgical interventions since 2005 have been recorded. In addition to the surgical data, the findings of the yearly follow-up investigations were recorded.

Results: Since 2005 there have been 1,263 gastric balloon procedures, 11,840 sleeve gastrectomies, 13,722 Roux-en-Y gastric bypasses and 3999 gastric banding operations. The average age of the male patients in all interventions was significantly higher. The average BMI of female patients who received a gastric banding or a gastric balloon procedure was significantly lower than that of the male patients. Men exhibited a higher incidence of comorbidities than women.

Conclusion: The number of obesity and metabolic surgical interventions in Germany is continuously increasing. The results of the study on surgical therapy for obesity (GBSR) reveal significant differences in the gender-specific incidence of preoperative comorbidities, postoperative complications and mortality. Further studies on gender-specific aspects are necessary in order to optimize patient selection and reduce the incidence of postoperative complications.

OP.358

20- YEAR LONG-TERM RESULTS AFTER GASTRIC BANDING**Christine Stroh**, Ulrich Hohmann, Harald Schramm, Thomas Manger*SRH Wald-Klinikum Gera*

Background: Gastric banding (GB) is a common bariatric procedure that is performed worldwide. Number of GB procedures is decreasing during the last years due to the reported long-term weight loss and long-term complications. Weight loss can be substantial after this procedure, but it is not sufficient in a significant portion of patients. Long-term rates for associated complications increase with every year of follow up, and only a few long-term studies have been published that examine these rates. We present our results after 20 years of postoperative follow up.

Methods: Two hundred twenty eight patients were operated upon from 01.02.1995 to 31.01.2015. Data collection was performed prospectively. In retrospective analysis, we analyzed weight loss, short- and long-term complications, amelioration of comorbidities and long-term outcome.

Results: The mean postoperative follow up time was 192 months (range 1-240). The follow up rate was 78.5%. The incidence of postoperative complications for slippage and pouch dilatation was 8.5%, for band migration was 5.7% and 12.0% for overall band removal. After 20 years, the reoperation rate was 20.6% with a reoperation rate of 1.03% for every year of follow up. Excess weight loss was 40.2% after 1 year, 46.3% after 2 years, 45.9% after 3 years, 41.9% after five years, 33.3% after 8 years, 30.8% after 10 years, 33.3% after 12 years and 21,2% after 15 years of follow up. No patient has 20 years after operation the band still in place.

Conclusion: The complication and reoperation rate after GB is high. But for most of the other available procedures really eligible data on long term outcome and reoperation rate are missing. Nevertheless, GB is still a therapeutic option in morbid obese patients, but the criteria for patient selection should be carefully evaluated.

OP.363**NECESSITY OF PROPER FILLING ADJUSTMENT FOR GESTATIONAL, NEONATAL, AND MATERNAL SAFETY FOLLOWING GASTRIC BANDING****Minyoung Cho**¹, Ha-Jin Kim¹, Bodri Son², Kyungmam Eoh², Jung-Eun Kim³, Gyu-Hee Chae², Jae-Yong So², Sun-Ho Lee², Nam-Chul Kim²¹ *Seoul 365mc Hospital, Seoul, Korea*² *365mc Obesity Clinic Network, Seoul, Korea*³ *365mc Obesity Research Institute*

Background: LAGB is a safe procedure; there is no negative implication on maternal, obstetrical and perinatal challenges when the patients are well tolerated during the pregnancy. This study is to look for proper filling adjustment for maternal, gestational and neonatal safety.

Methods: Data were recorded prospectively by patients' hospital visits and regular phone interview who undertook LAGB (LAP® Aps, Allergan, USA) at Seoul 365mc Hospital, Korea for 5 years.

Results: We registered 29 women of 720 reproductive aged patients (18-40 years old) had 30 pregnancies with a total of 29 babies born with a twin and 1 miscarriage. The filling volume at the diagnosis of pregnancy and delivery was 5.9cc and 3cc. None presented gestational or obstetrical complications. 16 patients were unfilled once during the gestation (6.6cc vs. 4.9cc). Mean unfilling time was gestational 12 weeks. Mean filling volume at the diagnosis of pregnancy and delivery was 5cc in the absence of the unfilling (AUF) group and the unfilling (UF) group was 6.6cc and 2cc in ($p < 0.001$). There was no difference of weight gain in two groups during pregnancy (11.7kg vs. 12.8kg). Caesarean section was significantly higher in the AUF group (61.5% vs. 12.5%, $p = 0.02$). There was no difference of newborn weight (3.3kg vs. 3.1kg). No perinatal complications or malformations were recorded. 4 patients (6.1cc) of the AUF group needed an unfilling procedure within postpartum 1 month.

Conclusions: According to our study, the band loosening is recommended that the filling volume is at least lower than 5cc for more tolerable and safe gestational period.

OP.369**FUNCTIONAL ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) AFTER FAILED SLEEVE GASTRECTOMY (SG): SURGICAL TECHNIQUE****F. Greco**, L. Pedretti*Clinica Castelli, Bergamo, Italy*

Background: Recent dates show insufficient weight loss and weight regain in about 30% of patients after SG. Failures is related to enlargement of the sleeve with time or inadequate technique e.g. the uncompleted removal of gastric fundus.

Re-sleeve seems an option but with a high rate of morbidity due to stapling in scarred tissue; also, this approach is prone to re-enlargement with time.

Method: We propose a simple and innovative technique to convert a failed SG: after creating an opening on the lesser curve, a 6-cm GaBP Ring® Autolock System Bariatec is placed over the “sleeve” at the level of incisura angularis calibrating the external diameter at about 2 cm. A loop of bowel is brought up ante-colic and latero-lateral anastomosis is performed above the ring with 45 mm EndoGia. The length of the biliopancreatic loop is chosen according to the volume of the pouch and to the patient’s residual eating capability after sleeve: full malabsorptive effect is reached with 300 cm alimentary limb as described in the Ileal Food Diversion technique.

Results: This technique add malabsorption to residual restriction after SG. Re-sleeve of the pouch is not necessary and full reversibility is assured. The preferential route of food is through the anastomosis as demonstrated by the postoperative x-ray swallow.

Conclusion: Conversion from SG to OAGB is an option with correct scientific assumption. Avoiding the detachment of the pouch from the antrum preserve the reversibility of the technique and the access to the biliary tree and to the remnant stomach.

OP.380

POSTOPERATIVE EXCESS WEIGHT LOSS IN PATIENTS WITH COMPLICATIONS AFTER BARIATRIC SURGERY

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Background: On the long term, one of the effective treatments for morbid obesity is bariatric surgery. Although relatively safe, around 10% of the patients experience short term complications (< 30 days), ranging in severity. Since the percentage of excess weight loss (%EWL) is an important endpoint of bariatric surgery, this study aimed to inventory whether any short term complication effects the %EWL.

Methods: A consecutive database including patients who were operated from November 2007 onwards was retrospectively reviewed. All short term complications were both classified according to the Clavien Dindo classification and divided in surgical and non-surgical complications. %EWL was assessed at 6 and 12 months postoperatively.

Results: Twelve hundred twenty patients underwent primary (983 patients, 80.6%) and revisional (237 patients, 19.4%) surgery till October 2013. Complications occurred in 135 (11.1%) patients, of which 52 patients (4.3%) had a severe (requiring at least endoscopic treatment) complication, 76 (6.2%) were surgical. After six months, patients with a complication had significant more %EWL than patients without a complication (55.8% versus 50.7%; $p=0.019$). Although not significant, after one year a trend was seen towards more %EWL in patients with complications (68.8% versus 62.4%; $p=0.08$). Distinction between surgical or severe complications showed no difference.

Conclusion: Even though short term complications do alter the %EWL after six months, this was not evidently seen one year postoperatively. It can be concluded that short term complications do not impair %EWL after bariatric surgery.

OP.383

REVISIONAL BARIATRIC SURGERY: FROM BAND TO RYGBP. STANDARDISATION OF A TECHNIQUE.

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Introduction: Restrictive bariatric procedures like LAGB may have a long term failure or significant weight regain in up to 36% of patients and many would require a revision surgery. The ideal operation to manage failed Band has not yet been defined. The purpose of this study is to describe our experience and complications of the LRYGBP as redo surgery in a “single step” procedure.

Method: This study was designed to identify the methodology to standardize a surgical technique and to measure the effectiveness of this standardization. From 2003 to 2014, 3581 patients underwent gastric band. As rescue procedure, for insufficient weight loss, we have carried out 121(3,37%)LRYGBP.

Technique: complete mobilization of the Band and clear visualization of angle of Hiss; the 4,8 mm cartridges are used to transect the stomach; construction of the pouch in well blood supplied tissue; blue test on both anastomosis

Results: There was no mortality in the study, with very low postoperative morbidity. No anastomotic leaks, no conversion to open surgery, a case of UGIH treated conservatively. In 3 patients the LRYGBP was performed in a two-step surgery for local obstacle. Average EWL was 66% at 24 months.

Conclusions: Revisions are associated with greater risks than primary weight loss surgery, as adhesions from previous surgery and thickness of tissue, are increasing the possibility of complications. A well trained team is a fundamental prerequisite for revisional surgery. In our experience the laparoscopic Roux-en-Y gastric bypass as revision weight loss surgery, can be safely performed, previous inflexible standardization of operative steps.

OP.388

CARDIAC REFERRALS – A HEARTACHE FOR BARIATRIC PATIENTS

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Background: Pre-operative cardiology assessment is an integral part of the evaluation for patients undergoing weight loss surgery. The revised cardiac risk index (RCRI) is a validated tool for predicting the risk of major cardiac events perioperatively. Multiple factors stratify individuals into four classes, the risk of cardiac events increases with each class. The aim of this study is to assess whether the number of cardiology referrals could be reduced by applying RCRI, yet still capture the pre-operative cardiac interventions.

Methods: Between 2005 -2013, a cohort of 500 patients that were evaluated for weight loss surgery was identified. Retrospective analysis of the clinical records was undertaken. Data collected included: RCRI, cardiology referral, cardiac investigations, interventions, and waiting time.

Results: Of the 500 patients, 113 (23%) were referred to cardiology. 5 of the 113 patients (4%) required a cardiac intervention, all were in class III and IV (5 interventions, n=63). There were no cardiac interventions in class I and II (n=50). Patients in class III & IV were more likely to require a cardiac intervention than classes I & II ($p<0.05$). Of the 387 patients that were not referred to cardiology, none required any cardiac intervention. The waiting time for surgery was significantly less than those referred to cardiology 196 vs 0 days ($p<0.001$).

Conclusions: Cardiology referrals increase waiting time. Cardiac interventions are more likely in classes III and IV. Limiting cardiology referrals to this group would reduce waiting times and the number of referrals.

OP.390

MARGINAL ULCER PERFORATION AFTER MINI BY-PASS

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Introduction: Laparoscopic mini gastric by-pass after laparoscopic sleeve gastrectomy (LSG) is a method of treatment for patients with weight regain and standard preoperative preparation is needed.

Case description: A 35-y-old woman was transferred from other regional hospital for abdominal sepsis. CT: free abdominal liquid and free air bubbles, localised. January 2014 laparoscopic conversion from sleeve gastrectomy to mini gastric by pass was performed. 1,5 month after mini gastric by pass upper endoscopy showed marginal ulcer with bleeding treated with 2 IU of blood and PPI with complete remission on repeated upper endoscopy. Good patient progress was obtained. Improvement in lean body mass, BW, BMI 33 kg/m², EWL (%) and concomitant diseases was obtained. Laparoscopy was performed after short preoperative patient preparation for surgery. Diffuse peritonitis with anterior wall anastomosis perforation was present. Laparoscopic lavage, microbiology swab, two layers teaching with omentoplasty and drainage were performed. Laparoscopy showed right ovarian cyst. Broad spectrum antibiotic and 4 days complete parenteral nutrition were prescribed. Day 6 postoperatively laparoscopy for ovarian cyst torsion was done. Normal postoperative course was present.

Discussion: Prompt surgical intervention is needed in morbidly obese patients with any surgical complications and proper diagnostic methods are mandatory. Treatment should include broad spectrum antibiotics, therapeutic antithrombotic prophylaxis and transient complete parenteral nutrition to avoid metabolic complications. It is highly advised that urgent revisional surgery is performed by same bariatric surgeon in the hospital with proper intensive care unit.

OP.401

INFLUENCE OF GASTRIC PLICATION AND SLEEVE GASTRECTOMY ON CAROTID INTIMA-MEDIA THICKNESS OF OBESE PATIENTS

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Background: Carotid intima-media thickness (CIMT) is easily measured by B-mod ultrasound inexpensively. Previous studies showed that there is correlation between CIMT and coronary artery disease and stroke. We know that obese patients have increased values of CIMT compared to non-obese people. The aim of this research was to evaluate effects of laparoscopic sleeve gastrectomy(LSG) and laparoscopic gastric plication(LGP) on plasma lipid profile, body mass index (BMI), %excessive weight loss(%EWL) and CIMT measured by B-mode ultrasound and comparing them.

Methods: 48 obese patients, operated between January 2012 and June 2013 in our clinic were included in this study. Demographic data (age, sex, height and weight), BMI, %EWL, lipid profile, blood glucose levels, liver steatosis and CIMT of all patients were recorded preoperatively, on 3rd month and 6th month of operation.

Results: 25 sleeve gastrectomy and 23 gastric plications were performed. Groups were statistically similar in terms of age, sex, BMI, CIMT preoperatively. After 3 and 6 month of operation biochemical parameters had improved statistically significantly. Likewise BMI and %EWL values were decreased significantly. CIMT values also diminished in both groups significantly

Conclusions: LGP and LSG improves blood glucose and lipid profile of obese patients. CIMT values of obese patients decreases after bariatric surgery. This decrease is proportional to decrease of BMI and cholesterol levels. By this way bariatric surgery may be protective against coronary artery disease and stroke for obese patients.

OP.417

PREDICTING OUTCOMES OF BARIATRIC SURGICAL INTERVENTIONS

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Introduction: Not all patients suffering from obesity benefit equally from bariatric surgeries. The difference of %EWL and %EBL may range from 5 to 25%. Being able to predict the extent of long-term weight loss could help in the choice of individualized treatment.

Objectives: The aim of our study was to investigate associations between the basal levels of BMI and the subsequent long-term weight reductions achieved via Scopinaro biliopancreatic diversion (SBD) and intragastric balloons (IB).

Methods: Our sample consisted of 97 patients, who were treated using IB; 46 patients with morbid and superobesity underwent SBD. Two years later, the postoperative outcome was studied on the basis of %EWL and %EBL. Efficacy of SBD and IB interventions was evaluated in a series of multiple regressions.

Results: Following an IB intervention, %EWL and %EBL of the patients with basal BMI of 25-40 were observed at $31.2 \pm 15.9\%$ and $42.2 \pm 27.2\%$. Multiple regression analyses showed a moderate level of negative associations between basal BMI and %EWL, %EBL ($r = -0.307$, $p = 0.004$; $r = -0.474$, $p < .001$). Following an SBD intervention, %EWL, %EBL of the patients with basal BMI of 40-49 were observed at 72.78% and 81.8%; for patients with basal BMI of 50-69 - at 53.2% and 57.1%. There were moderate negative associations between the basal levels of BMI and %EWL, %EBL ($r = -0.391$, $p = 0.002$; $r = -0.501$, $p < .001$).

Conclusion: Our findings indicate that preoperative levels of BMI can predict long-term weight loss outcomes following an IB and SBD interventions.

OP.419

MINIMAL INVASIVE TREATMENT OF CHOLEDOCHOLITIASIS AFTER GASTRIC BYPASS

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Background

Laparoscopic gastric bypass is one of the most performed bariatric operations worldwide. The exclusion of stomach and duodenum after this operation makes the access to the biliary tree, in order to perform an endoscopic retrograde cholangiopancreatography (ERCP), very difficult. This procedure could be more often required than in overall population due to the increased incidence of gallstones after bariatric operations. Among the different techniques proposed to overcome this drawback, laparoscopic access to the excluded stomach has been described by many authors with a high rate of success reported

Case report

A 35 year-old male with choledocholithiasis after Roux en Y gastric bypass underwent laparoscopic transgastric ERCP. A gastrotomy on the excluded stomach is performed to introduce a side-viewing endoscope to access the biliary tree and remove gallstones. Patient was discharged in the 2nd post operative day uneventfull.

Conclusion

The present technique offers us a standardized, safe, and reproducible access to the major papilla and the biliary tree using a transgastric access in patients with gastric bypass and choledocholithiasis.

OP.420**GASTRIC BANDING GRAFT SURVIVAL IN FRANCE: ANALYSIS OF 52 000 PATIENTS FROM A NATIONAL ADMINISTRATIVE DATABASE.**

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Backgrounds: Laparoscopic adjustable gastric banding (LAGB) represented the most common bariatric procedure in France until 2010. Since then the number of LAGB constantly decreases and the rate of band removal progressively increased. The aim of this study was to analyze the graft survival on a national basis.

Methods: All patients undergoing LAGB in France between 2007 and 2012 were included. Graft survival was calculated until band removal or at December 31st 2012 if band in place. Survival analysis was performed according to Kaplan-Meier method.

Results: During the study period 52 010 patients underwent LAGB. Mean age was 39.5 years; women prevalence was 85.6%, BMI was <40 in 32.6% of patients, 40-50 in 56.0% and > 50 in 4.2%. The number of procedures decreased from 10,478 in 2007, to 6736 in 2012 (- 64.3% over 6 years). Mean follow-up was 35.4 (0-71.5) months. A total of 8158 LAGB were removed (15.7%). Removal rates at 1, 3 and 5 years were 3.2%, 11.8% and 26.0%, respectively.

Female gender, BMI > 50, type 2 diabetes, hypertension, dyslipidemia and sleep apnea were found significantly associated with band removal on multivariate analysis.

Conclusions: LAGB was removed in a quarter of patients at 5 years. Taking into account an average removal rate of 5% per year, LAGB cannot be considered as a durable and valuable option in the treatment of a chronic disease such as obesity.

OP.421**A SYSTEMATIC REVIEW AND META-ANALYSIS OF THE EFFECT OF GASTRIC BYPASS SURGERY ON PLASMA LIPID LEVELS**

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Background: Obesity related dyslipidaemia comprises: hypercholesterolaemia, hypertriglyceridaemia, low HDL-cholesterol and normal to raised LDL-cholesterol levels. Roux-en-Y Gastric bypass (RYGB) surgery has many beneficial metabolic effects but the full impact on plasma lipids has not been clearly defined.

Methods: A systematic review of electronic databases (Ovid; Medline; PubMed; Embase) between 1960 and March 2012 was performed using search terms including: obesity surgery, bariatric surgery, gastric bypass, cholesterol, lipids, triglycerides, non-esterified fatty acids. A total of 2442 manuscripts were screened. Papers with paired plasma lipid levels around RYGB surgery were included. Exclusions included: editorials, dual-publications, n<10, resulting in 75 papers of relevance. A meta-analysis was performed of the effect of RYGB surgery upon plasma lipids at different time points up to four years following surgery, using a random effects model.

Results: Paired data were available for 7815 subjects around RYGB surgery for morbid obesity with a baseline BMI 48 kg/m² (n=2331). There was a reduction in plasma total cholesterol and LDL-C from one month up to four years post-RYGB (p<0.00001, p<0.00001). Following RYGB, HDL-C increased from one year onwards (p<0.00001) and triglyceride levels were reduced post-operatively from three months up to four years (p<0.00001).

Conclusions: RYGB surgery reverses the dyslipidaemia of obesity. These findings support the use of RYGB in the management of high cardiovascular risk lipid profiles in obesity.

OP.456**MULTIPLE REVISIONAL BARIATRIC SURGERY - GASTRIC BYPASS**

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Introduction: Morbid obesity is a chronic disease, and surgery is a key piece in its long-term control. With the rise of bariatric surgery, also increases the number of patients with weight regain, or post-operative chronic complications, that need surgical revisions to maintain the long term results. Nevertheless, revisional bariatric surgery still has high rates of morbidity, and multiple reoperations increases the technical challenge.

Objectives: To present a video showing technical aspects, and feasibility, of a third bariatric surgery (sixth upper abdomen procedure).

Methods: Female patient, 34 years, BMI 66, was submitted to LapBand, with Nadir in BMI 33. Presented obstruction by slippage, with new laparoscopy and repositioning of the Band. After another slippage, the Band was removed, and an hiatoplasty performed. After a Lap cholecystectomy, and presenting regained weight, a sleeve gastrectomy by open surgery was made (BMI 46). With unsatisfactory results (Nadir in BMI 38.5, current BMI 44), deterioration of symptoms of GERD, and vomiting / food intolerance, was opted to a new revision, to a gastric bypass, by laparoscopy, when was also held a new hiatoplasty.

Results: The surgery was uneventful. The patient was discharged on postoperative day four, with uneventful recovery, improvement of intolerance without vomiting, and no GERD.

Conclusion: Multiple bariatric operations are feasible, and the patient may benefit in quality of life improvement, and weight control. Laparoscopy is the preferential access, even after open and multiple previous procedures. Reference Centers in revisional bariatric surgeries may, for concentration of experience, contribute to improve results.

OP.457

WEIGHT LOSS AT THREE MONTHS AFTER ROUX-EN-Y GASTRIC BYPASS PREDICTS LONG-TERM OUTCOME

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Background: Previous studies show that there is a wide variety in weight loss response after Roux-en-Y gastric bypass (RYGB). Early identification of 'low responders' could allow additional lifestyle intervention and patient specific postoperative care to enhance weight loss. The aim of this study was to identify the predictive value of weight loss at 3 months postoperative for weight loss at 12 and 24 months.

Methods: Data of 2416 patients who underwent RYGB surgery at the Dutch Obesity Clinic was collected, prospectively. Variation in weight loss was assessed at 3, 12 and 24 months postoperative and predictive factors to determine long-term outcome were used in multivariate analysis. Subsequently, weight loss results were divided into quartiles for each time of measurement.

Results: Patients in the first quartile (lowest % total body weight loss (%TBWL)) at 3 months were more likely to have a low %TBWL at 12 and 24 months ($p < .001$). Patients in the three other quartiles at 3 months were unlikely to have poor weight loss at 12 and 24 months ($p = < .001$). Multivariate analysis, including baseline variables of BMI, age and sex, showed that weight loss at 3 months was an independent predictor for definitive %TBWL.

Conclusions: Weight loss 3 months after RYGB is a predictive factor for outcome at 12 and 24 months, especially for poor responders. Therefore, additional lifestyle changing intervention, on top of the regular follow up program, might enhance long-term weight loss in poor responders and thus improve treatment efficacy.

OP.462

BARIATRIC SURGERY AND PRIMARY CARE PHYSICIANS IN ENGLAND: IS LACK OF ENGAGEMENT HOLDING US BACK? A PILOT STUDY

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Background: Two million people in England fit the criteria for weight-loss surgery (WLS), however less than 7,000 patients underwent bariatric procedures in 2011. General Practitioners (GP) act as gatekeepers to refer eligible patients. This first of its kind study in England assess GP attitudes towards obesity and WLS.

Methods: A questionnaire was emailed to GPs within London and Norfolk. Questions related to responders' demographics, and experience and opinions regarding WLS.

Results: Twenty-eight GPs with a mean of 14 years experience responded (22.4%). Although responders estimated that on average 28% (SD) of their practice population suffered obesity-related co-morbidities, 19 had not referred any patients to bariatric surgeons in the last year. Of referrals made, 44% (8/18) were for private consultations. Over the last year, responders provided medical care to an average of 1.4 patients post-WLS (range 0-10). Eleven percent (3/28) felt well-supported managing surgical problems of patients post-WLS and 18% (5/28) felt well-supported managing medical problems. Nonetheless, 100% agreed WLS improves comorbidities including diabetes and 96% agreed it improves quality of life. Most respondents believed that WLS should be NHS funded (64.2%), more widely available (57.1%), and that benefits of surgery out-weighed risks (64.2%).

Conclusions: Obesity continues growing in England and it is important that GPs engage with and increase WLS referrals. Most GPs support WLS, however do not feel well supported in managing patients post-WLS, and low referral rates may reflect this.

OP.468

THE IMPACT OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) ON OBESITY-RELATED COMORBIDITIES IN AN NHS COHORT OF TYPE 2 DIABETIC PATIENTS; A PROSPECTIVE STUDY.

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Background: Obesity is strongly associated with several co-morbidities, many of which can lead to premature death. This prospective study evaluates the impact of LAGB on obesity-related co-morbidities in type 2 diabetic patients.

Methods: Inclusion and exclusion criteria were applied to consecutive diabetic patients undergoing LAGB. Demographic and disease specific data were collected at baseline and 6-monthly intervals corresponding to follow-up assessments. Minimum follow-up was 24 months. British Hypertensive Society guidelines for hypertension were used. Normally distributed variables were assessed with one-way analysis of variance/ t-tests; correlations were analyzed with Pearson's test, and proportions with Chi-squared/ Fisher's exact tests.

Results: 120 patients with a median age of 43.3 years and mean (\pm SD) pre-op BMI of 48.7(\pm 8)kg/m² were included. BMI reduced significantly, with annual post-operative means of 41.4 \pm 7.8, 39.9 \pm 7.7, 39.5 \pm 7.8, 39.3 \pm 7.1 and 36.6 \pm 5.4 kg/m² (p<0.001). Mean blood pressure (BP) reduced from 154/91 \pm 17.9/9.4 to a minimum of 126/77 \pm 15.8/8.9 by 48 months post-LAGB in hypertensive patients (p<0.001). BP strongly correlated with weight loss in this cohort (p=0.001). The proportion of clinically hypertensive patients reduced throughout follow-up (86% pre-operatively vs.17% at 48 months; p<0.001). Significant changes in HDL cholesterol (maximum 1.02 \pm 0.35 pre-operatively vs.1.25 \pm 0.35mmol/L; 24 months; p<0.001), triglycerides (2.49 \pm 1.78 vs.1.53 \pm 1.22mmol/L; 18 months; p=0.014), and total cholesterol: HDL (4.90 \pm 1.86 vs.4.01 \pm 1.38; 36 months; p<0.001) extend throughout the follow-up period. Significant reductions in anti-hypertensive, anti-depressant, and anti-asthma medication, and analgesia use are seen throughout follow-up (p<0.001- <0.05 all cases).

Conclusions: The considerable improvements in obesity-related co-morbidities demonstrated following LAGB, should confer significant morbidity and mortality benefits to this high-risk patient group.

OP.471

NEUROMUSCULAR ACTIVITY OF HUMAN ISOLATED STOMACH FROM OBESE PATIENTS IS NOT DEPENDENT ON AGE OR BMI STATUS

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Background: Understanding and developing novel treatments for disorders of gastric motility can be greatly assisted by studies with human isolated stomach. Using tissue from patients undergoing sleeve gastrectomies for obesity we have characterised neuromuscular responses to electrical field stimulation (EFS) of intrinsic neurons and investigated potential confounding effects of age and BMI

Methods: Human antrum (69 patients) and fundus (40 of the 69 patients) were obtained following informed consent. The median (range) age and BMI were, respectively, 46 (23 – 72) years and 51 (39 – 71); the M:F ratio = 1:2.6. Mucosa-free strips were cut parallel to the circular muscle and suspended in tissue baths for EFS (0.5ms, 5Hz, 10s every min) as described (Broad et al, 2012, Br J Pharmacol 167, 763-774). Linear regressions were performed to determine correlations between responses; N=patients.

Results: EFS caused contractions which were cholinergically-mediated (abolished by atropine 1 μ M (n=9 antrum, 5 fundus) or TTX 1 μ M (n=11, 4)). The antrum generated greater tension during contraction (0.40 \pm 0.04g tension; 525 strips, 69 patients), compared with the fundus (0.27 \pm 0.04g; 181 strips, 37 patients; relaxation observed in 9 strips). This was not influenced by age (antrum: correlation slope=0.3 \pm 3.0mg/yr, r²=0.0001, p=0.92; fundus: slope=2.6 \pm 3.5mg/yr, r²=0.02, p=0.46) or BMI (antrum: slope= -6.5 \pm 3.7mg/kg.m⁻², r²=0.04, p=0.08; fundus: slope= 4.0 \pm 4.1 mg/kg.m⁻², r²=0.03, p=0.34). Notably, the contractions were attenuated by simultaneous

activation of nitrergic inhibitory neurons during EFS. Thus, the nitric oxide synthase inhibitor L-NAME 300 μ M increased the contractions in the antrum (by 31 \pm 19%, n=20) whereas in the fundus, little or no facilitation was observed (4 \pm 7%, n=6). This effect of L-NAME was not influenced by age (e.g. antrum: slope=-2.7 \pm 1.4%/yr, r^2 =0.17, p=0.07) or BMI (antrum: slope= -0.7 \pm 2.1%/kg.m², r^2 =0.006, p=0.75).

Conclusions: Cholinergic and nitrergic neuromuscular responses of human gastric fundus and antrum from obese patients are not influenced by differences in age or BMI.

OP.476

LAPAROSCOPIC SLEEVE GASTRECTOMY IN CHILDREN AND ADOLESCENTS WITH PRADER-WILLI SYNDROME

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Background: Obesity is a leading cause of death and severe morbidity in Prader-Willi syndrome (PWS) patients, without effective treatment to date.

Methods: Data of PWS patients were extracted from our standardized pediatric bariatric surgery pathway prospective follow-up database. All PWS cases were confirmed through genetic testing. Weight loss, complications, comorbidities, and growth after LSG in up to 5 follow-up years were reported.

Results: The twenty-one patients (mean age=10.7) with PWS had a preoperative body mass index (BMI) and a height z-score of 46.2 \pm 12.6 and 0.7 \pm 1.2, respectively. All patients had obstructive sleep apnea (OSA), 62% had dyslipidemia, 43% had hypertension, and 29% had diabetes mellitus. BMI change after one (n=18 patients), two (n=14), three (n=8), four (n=9), and five (n=4) years was -15 \pm 6, -15 \pm 7, -12 \pm 7, -13 \pm 9, and -14 \pm 10, respectively. 95% of comorbidities were in remission or improved. One patient developed recurrence of OSA secondary to weight regain and was readmitted five years after surgery with atrial fibrillation and right-sided heart failure. No other readmissions, reoperations, prolonged hospital stay, postoperative leak, or other major surgical complications occurred, and there was no mortality or significant morbidity during the five years of follow-up.

Conclusions: Children and adolescents with PWS experience safe and effective weight loss and resolution of comorbidities after LSG, without mortality, significant morbidity, or slowing of growth. We believe that LSG should be offered to obese PWS patients with heightened mortality particularly without other alternative therapy approaches available.

OP.477

5 YEAR READMISSION RATES IN A HIGH VOLUME BARIATRIC UNIT IN COMPARISON TO NATIONAL AND INTERNATIONAL BENCHMARKS

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Background: Readmissions are an important quality metric for bariatric surgery

Methods: Retrospective analysis of hospital data of bariatric surgery admission, operations and readmissions between 1st January 2010 and 31st December 2014 was performed from large bariatric surgery centre in UK

Results: 1953 bariatric procedures were performed: 53.7% Gastric bypass RYGB, 30.6% Sleeve Gastrectomy SG, 1.38 % Gastric banding AGB, 2.6% Duodenal Switch DS, 7.1% revisional surgery and 4.6% band removal. There were a total of 36 (1.84%) readmissions within 30 days and 92 (4.6%) readmissions after 30days from discharge.

The 30 days readmission rates were: RYGB 20 (1.91%), SG 8 (1.34%), AGB 1 (3.70%), Revision bariatric surgery 5 (3.60%), Laparoscopic Band Removal 3 (3.33%) and DS 0.

Readmission rates after more than 30 days post procedure were: RYGB 41 (3.91%), SG 23 (3.85%), AGB 1 (3.70%), DS 6 (12%), Revision bariatric surgery 16 (11.51%), Laparoscopic Band Removal 6 (6.60%).

Results were compared to national and international benchmark rates. Our group bettered national and international benchmarks regarding 30 days readmission rate after Bariatric Surgery: 1.84%, (published studies Range 5 – 8%)

Main reasons for the 30-day readmissions were: therapeutic endoscopy 54.1%, gastric band management 13.5%, pain and diarrhoea 10.8%, Post op wound infection 8.1%, repair of abdominal hernias 8.1%, revision operations 5.4%

Reasons for readmissions after 30 days post op include gallstone disease 13.1% and revision operations 10.9%.

Conclusions: While we are much better than national and international benchmarks for readmission within 30 days, the readmission rate after revisional and DS procedures are higher for more than 30 days

OP.483

NISSEN FUNDOPLICATION ASSOCIATED GASTRIC PPLICATION: INICIAL RESULTS

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Introduction: The obesity and reflux disease are associated conditions which treatment is very difficult. Several studies have shown the barriers to treat patients with gastroesophageal reflux and obesity class I.

Objective: Development of associated technique to treat the two conditions, comparing De Meester index and BMI before and 3 months after surgery.

Methods: From April 2012 to June 2014, we selected 10 patients with BMI 31-35. Underwent fundoplication associated to gastric plication and 3 months after the surgery were compared the De Meester index and BMI in content with the pre surgery results.

Results: All patients had weight loss and regular De Meester index after surgery. After surgery, the BMI decreased 33,6 kg/m to 29,2 kg/m. De Meester index decreased 20 to 1,95.

Conclusion: The technique used is a good choice for treatment of reflux disease and obesity. More studies are necessary to show the advantages of this combined procedure.

OP.491

COMPARATIVE ANALYSIS OF STAGED VERSUS SINGLE STAGE REVISION OF FAILED ADJUSTABLE GASTRIC BAND

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Introduction: The major indication for revision of adjustable gastric banding (AGB) is inadequate weight loss, weight regain and several band related complications. Controversy still exists regarding the relative safety of staged versus single stage conversion of AGB to an alternative bariatric procedure.

Objective: We analyzed our data to compare the efficacy and safety of a staged versus single stage revision of AGB

Method: A single institution, prospectively maintained bariatric data base was used to retrospectively identify all patients who underwent revisions of AGB to another bariatric procedure from Jan '09 -Dec '13. Patient demography, indications for conversion, and postoperative outcomes including complications and percentage excess weight loss(%EWL) were analyzed.

Results: We performed 19 revisions of AGB to another bariatric procedure out of which 9 revisions were staged procedures with the AGB already removed (Group A). All of them were revised to Laparoscopic Sleeve Gastrectomy (LSG). 10 (Group B) were single stage removal of band and revision to LSG (n=8), Roux-en-Y Gastric bypass (RYGB) (n=1) & single anastomosis gastric bypass (n=1). The demographic profile was comparable between the two groups. The indication for revision in 4 patients of Group A and all patients in Group B was inadequate weight loss or weight regain. Remaining 5 patients in Group A were revised due to infection or erosion of band. % EWL at the end of 12 months and 24 months in both the groups were comparable. The mean hospital stay was 2.8 days (second stage procedure) in Group A and 3.7 days in Group B. No major morbidity or mortality was observed in either group.

Conclusions: The %EWL and morbidity is comparable in both groups. The cumulative hospital stay for the staged procedure is more than the single stage procedure. Single stage revision of failed AGB due to inadequate weight loss or weight regain to a concomitant bariatric procedure is safe and efficacious.

OP.500

FACTORS AFFECTING WEIGHT LOSS AFTER BARIATRIC SURGERY

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Introduction: The method of operation used in bariatric surgery is usually fixed. In spite of this, the range of weight loss is different in them. It seems there is another factor that influences weight loss.

The aim of this study was to evaluate the other factors influencing weight loss in them.

Material and methods: We evaluated the patients who were operated on for more than one year ago. The investigated factors were as follows: age, sex, sweet eater, drinker, binge eater, psychological problems, single, divorced, duration of obesity, diabetes, hyperlipidemia, hypertension, joint diseases, child bearing, family history of obesity, history of successful weight loss, information about its complication (preoperative data); weight, body mass index, types of operation, length of alimentary limb, preoperative group consultation (operative data); on time follow-up visits, use of vitamins, liquid user, sweet user, abdominal pain, nausea, child bearing, living alone, swimming, return to regular diet, appetite, willingness to watery food consumption (postoperative data).

Results: The study showed that age, duration of obesity, living alone, psychologic disorders, willingness of watery food users, types of operation, sweet users and on time follow-up visits can influence weight loss after bariatric surgery.

Conclusion: Based on these criteria which could prevent appropriate weight loss it is recommended to schedule operations individually. Family support, psychologic stability and commitment to regular diet after operation may guarantee appropriate weight loss.

OP.505

CHANGES IN PORTAL MILIEU AFTER SLEEVE GASTRECTOMY: A POTENTIAL NOVEL ANTI-DIABETIC MECHANISM OF ACTION

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Background: Bariatric surgeries lead to improvement in diabetes but the exact mechanism remains elusive. Our studies have suggested a role for changes in intestinal glucose utilization and nutrient absorption for early metabolic benefits of gastric bypass surgery (RYGB) but the relevance of this pathway after Sleeve Gastrectomy (SG) is unknown and forms the basis of these studies.

Method: Rats underwent a SG or control surgery (n=4/group). Daily weight and food intake were recorded. After 4 weeks, a duodenum cannula was placed for luminal glucose infusion as well as jugular and portal vein catheters for systemic and portal blood sampling at baseline (fasting) and 10, 30, and 60 minutes after duodenal glucose infusion. Glucose, GLP-1, GIP, and Ghrelin in systemic and portal circulation were measured. Porto-Systemic (PS) glucose gradients were determined to assess intestinal glucose utilization and absorption.

Results: SG led to reduced food intake and weight loss. SG did not change the PS glucose gradient, suggesting no changes in intentional glucose utilization ($P>0.05$). Intestinal glucose absorption capacity also remained unchanged ($P>0.05$). All these results were in contrast to changes seen after RYGB. After SG, post-prandial portal GLP-1, GIP levels increased significantly ($P<0.05$), while ghrelin levels decreased.

Conclusion: Our study suggests that early changes in the portal milieu seen after RYGB are not seen after SG, and may explain the differences in metabolic outcomes between the 2 procedures. Changes in metabolic hormones especially GLP-1 and GIP may explain part of its metabolic benefits.

OP.506

LONG-TERM EFFECTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS ROUX-EN-Y GASTRIC BYPASS FOR THE TREATMENT OF CHINESE TYPE 2 DIABETES MELLITUS PATIENTS WITH BODY MASS INDEX 28-35KG/M²

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Background: To compare long term effects of two bariatric procedures for Chinese type 2 diabetes mellitus (T2DM) patients with a body mass index (BMI) of 28-35 kg/m².

Methods: Sixty four T2DM patients with Glycated hemoglobin A1c (HbA1c) $\geq 7.0\%$ were randomly assigned to receive laparoscopic sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB) procedure. Weight, percentage of excess weight loss (%EWL), BMI, waist circumference, HbA1c, fasting blood glucose (FBG), and C-peptide were measured. Serum lipid levels were also measured during three-year postoperative follow-up visits.

Results: Fifty five patients completed the 36-month follow-up. Both groups had similar baseline anthropometric and biochemical measures. At the end point, 22 patients (78.6%) in SG group and 23 patients (85.2%) in RYGB group achieved complete remission of diabetes mellitus with HbA1c $<6.0\%$ ($P=0.525$) and without taking diabetic medications, and 25 patients in each group (89.3% vs. 92.6%) gained successful treatment of diabetes with HbA1c $\leq 6.5\%$ ($P=0.100$). Changes in HbA1c, FBG and C peptide were comparable in the two groups. The RYGB group had significantly greater weight loss than the SG group [percentage of total weight loss (%TWL)

of 31.0% vs. 27.1% ($P=0.049$), %EWL of 92.3% vs. 81.9% ($P=0.003$), and change in BMI of 11.0 vs. 9.1kg/m² ($P=0.017$), respectively]. Serum lipids in each group were also greatly improved.

Conclusions: In this three-year study, SG had similar positive effects on diabetes and dyslipidemia compared to RYGB in Chinese T2DM patients with BMI of 28-35kg/m². Longer term follow-ups and larger sample studies are needed to confirm these outcomes, however.

OP.513

OBESITY AND PERIOPERATIVE PULMONARY COMPLICATIONS IN ROBOTIC-ASSISTED RADICAL PROSTATECTOMY

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Objective: Robotic-assisted radical prostatectomy(RALP) is the newest and most technically advanced method. RALP has the advantages of decreased blood loss, transfusion rates, shorter hospital stay and improved functional status have been reported. However, the pneumoperitoneum and steep Trendelenburg positioning required for minimally invasive pelvic surgery can exacerbate the obesity-related changes in respiratory physiology.

Study Design: A retrospective chart review was performed on obese patients (body mass index of 30 kg/m²) who underwent RALP between December 2008 and February 2012. The primary outcome was pulmonary complications and the secondary outcome was all-cause complications.

Results: Data from 100 patients who underwent RALP was obtained from the perioperative database. 3% of the patients had a pulmonary complication. The mean age was 62±6.5 years and mean BMI was 32±3.3 kg m⁻². No RALP patients received red blood cell, fresh frozen plasma or platelet transfusion intraoperatively. Total operative blood loss was less than 300 ml in all the patients. The arterial oxygen saturation was found to be stable throughout the procedure with a mean SpO₂ of 99 %. Heart rate and mean arterial pressure (MAP) values of all the patient were within the physiological range. RBC transfusion was required in 7 patients during the immediate postoperative period as hemoglobin level were less than 9 g dl⁻¹. Mean creatinine levels of the patients increased postoperatively compared to baseline, but these changes were within the normal range. All the patients were extubated in the operation room except for one patient who had laryngeal edema due to multiple intubation attempts.

Conclusion: The vast majority of obese patients can successfully tolerate RALP and have overall low complications rates and even lower rates of pulmonary complications. The degree of obesity was not predictive of successful robotic surgery and subsequent complications.

OP.514

BURDEN OF PRIVATELY-INSERTED LAPAROSCOPIC GASTRIC BAND COMPLICATIONS ON NHS

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Background: While laparoscopic gastric banding is a safe bariatric procedure in terms of early morbidity, studies with long-term follow-up show a high rate of late complications and re-operation in up to 80% over a 6 year period. In a high-volume obesity centre, what is the burden of privately-inserted gastric band complications on NHS resources?

Methods: In a single-centre study, the Electronic Patient Record was used to identify patients with gastric band re-operation (January 2010 - November 2014). Medical notes were reviewed and data tabulated. Measured outcomes assessed complications, investigations, operative procedures performed, and length of stay.

Results: A total of 92 patients were re-operated due to gastric band complications or failure, 66% were inserted privately and 33% in a NHS setting.

Across both groups, complications were band slippage (25%), food intolerance leading to failure (25%), reflux/gastritis (15%), port malpositioning (13%), band erosion (9%), port leak (8%), and port site infection (1%).

In the private-band patient group, investigations performed comprised chest x-ray (x10), contrast swallow (x29), CT scan (x8) and gastroscopy (x19). Operations performed, both as emergency (18%) and electively (82%), were band removals (66%), band removal with conversion to gastric bypass (8%), band removal with conversion to sleeve gastrectomy (5%), band repositioning (7%), and port repositioning (15%).

Average length of stay was 3 days.

Conclusion: The majority of late gastric band complications seen were inserted privately causing significant workload on the radiology, endoscopy, surgical inpatient and outpatient departments in this centre.

OP.517

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN THE ELDERLY: FEASIBILITY, SHORT TERM SAFETY AND IMPACT ON COMORBIDITY AND WEIGHT IN 250 CASES.

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Background : In an elderly population, frequently suffering from multiple comorbidities, laparoscopic Roux-en-Y gastric bypass is considered a high risk procedure. The aim of this study was to evaluate the feasibility and short term safety of this procedure and its impact on weight and existing comorbidities (type two diabetes, hypertension, sleep apnea, joint pain and hypercholesterolemia).

Methods : A retrospective analysis of all Belgian patients older than 60 years of age who underwent a laparoscopic Roux-en-Y gastric bypass between October 2004 and July 2012 has been performed. Patient files were reviewed and patients were telephoned to obtain lacking data. Demographics, postoperative course, weight evolution and comorbidities were registered.

Results : A total of 280 patients were included, 250 (161 female, 89 male) of which could be reached (24 lost to follow up, 6 died of unrelated causes). Mean age was 64.1 years (range 60-78 years). Mean BMI at surgery was 41.9 kg/m² (range 27.4-68 kg/m²). Mean hospital stay was 4.3 days (range 2-19 days). In the early postoperative course there was no in hospital mortality, 27 (10.8%) patients suffered from postoperative complications and 5 (2%) patients needed to be readmitted. In the late postoperative course mean excess weight loss was 59.5% (range 21.85%-120.14%). Resolution or improvement of diabetes, hypertension, joint pain, sleep apnea and hypercholesterolemia was seen in 94.6% (69/74), 77.6% (127/165), 57.6%(95/165), 88.0% (66/75) and 77.1% (108/140) respectively.

Conclusion: Laparoscopic Roux-en-Y gastric bypass is safe and feasible in an elderly population. All obesity related comorbidities improved during follow up.

OP.529

INDOCYANINE GREEN ENHANCED FLUORESCENCE IN LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Gastric leak is the most severe complication of sleeve gastrectomy. The aim of this study is to present our preliminary experience with indocyanine green fluorescence (IGF) in laparoscopic sleeve gastrectomy and to investigate whether this procedure may become an effective intraoperative diagnostic tool for gastric leak early detection.

Methods: Sleeve gastrectomy is performed in the standard technique. Once the stomach is resected an indocyanine green solution is prepared and injected in a periferic vein. A laparoscopic system with a high definition camera system (IMAGE 1 SPIES™, KARL STORZ) connected to a laparoscope with 30° field of direction and 10 mm diameter equipped with a specific filter for optimal detection of the near-infrared fluorescence was used at all times. A methylene blue test is routinely performed after near-infrared fluorescence and a routine gastrografin upper gastrointestinal study is performed on postoperative day 2.

Results: We retrospectively identified 15 patients undergoing laparoscopic sleeve gastrectomy between April and October 2014. IGF imaging was used for all patients. A regular and homogeneous perfusion was observed along the entire gastric sleeve including the esophago-gastric junction. Intraoperative methylene blue test was negative in all cases. The contrast swallow did not document any leak.

Conclusions: IGF is a recent development in minimally invasive surgery. IGF allows a real-time assessment and gives a direct image of tissue perfusion and vascularization. Moreover IGF may be helpful to explain the exact pathogenesis of gastric leak. A larger sample is required to provide stronger evidence supporting IGF use in sleeve gastrectomy.

OP.539

MANAGEMENT OF STAPLER MISFIRE DURING SLEEVE GASTRECTOMY- LESSON LEARNT

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Background: Apart from complications like gastric leak, bleeding, stricture, one complication which tests the surgical expertise and patience of the surgeon is Stapler Misfire. While performing Laparoscopic Sleeve Gastrectomy (LSG) staplers play the major role but

these staplers sometimes have mechanical problems and malfunctions which can lead to stapler misfire. The purpose of this presentation is to put forward a simple but very useful technique for dealing with stapler misfire intraoperatively.

Methods: This study was done at Max Super Speciality Hospital, Saket, New Delhi. We present a case of 43 year male who had a stapler misfire during Laparoscopic Sleeve Gastrectomy near to angle of HIS. Routinely we see for any wandering clip before firing every stapler, in this case also we had taken that precaution, but stapler misfired. This was dealt by intracorporeal suturing of the remaining part of the misfired segment with single layer Vicryl 2-0. Stapler could not be used as the misfired segment of stomach was very near to the angle of His.

Results: Post-operative recovery of the patient was uneventful. Post-operative gastrografen study showed intact stapler and suture line and the patient was discharged on 2nd postoperative day.

Conclusion: Intracorporeal suturing is a good option for dealing with the misfired segment during sleeve gastrectomy. This can be used as an alternative to stapler when the space for firing is restricted.

OP.540

THE SURGICAL TECHNIQUE INFLUENCES THE OUTCOME OF SLEEVE GASTRECTOMY, NOT THE BOUGIE SIZE

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Introduction: Many surgeons have adopted Laparoscopic Sleeve Gastrectomy (LSG) as the main bariatric procedure, achieving variable short- and medium-term results. Outcome variability is expected due to variability and controversies of the technique, confirming the opinion that ease and simplicity of the procedure is a misconception.

Objectives: We prospectively compared the effect of the Bougie size on the outcome of LSG one year after surgery. Failures were analyzed for the cause.

Methods: One hundred patients underwent LSG. They were randomized into two groups each including 50 morbidly obese patients with comparable age, weight and co-morbidities. We used a 40 Fr Bougie in Group I and a 56 Fr Bougie in Group II. In all patients we started stapling 4 cm from the pylorus, proceeding adherent and parallel to the Bougie, resecting equal anterior and posterior gastric walls, completely resecting the gastric fundus, dividing the stomach 1 cm from gastroesophageal junction, and avoiding projections.

Results: No mortality or leakage occurred. No significant one-year excess weight loss percent (EWL%) difference was found ($72.3 \pm 20.6\%$ vs $70.1 \pm 20.9\%$, respectively). Sleeve failure was reported in 2 patients in group I and 3 patients in group II with average EWL% of 42.3 % only. Failure was attributed to redundancy of the posterior wall of the stomach, non-conformity of the sleeved stomach and incomplete resection of the fundus of the stomach.

Conclusion: The surgical technique is more important than the Bougie size in influencing the outcome of sleeve gastrectomy.

OP.549

BARIATRIC SURGERY: ANSWER TO THE NORTH TO SOUTH TILT OF BRITAIN?

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Background: National Environment Research Council (NERC) reported that North of Britain land is rising while the South sinks. We sought to look for an answer to this concerning problem rather than blaming it on global warming. Our unit performs high number of bariatric surgery in the North. Bariatric surgery contributes to significant weight loss (WL) causing a significant difference in the weight in the North and the South. Our objective was to find the total kilograms (Kgs) of WL in our patients.

Methods: We analysed prospectively collected data of 2599 consecutive patients undergoing bariatric surgery in our unit. 607 patients had Gastric balloon (GB) insertion, 387 had Sleeve Gastrectomy(SG), 84 had Mini Gastric Bypass(MGB), 1519 had Roux-En-Y Gastric Bypass (RYGB).

Results: 515 patient with GB had WL of 5460.6kgs at 6 months follow-up(f/u). 341 patients with SG lost 13,290.1kgs at 1 year f/u. 2079.1kgs was the WL of 58 patients with MGB at 1 year f/u. 783 RYGB patients lost 26,717.5kgs at upto 2 year f/u and 418 of RYGB lost 9758.3kgs at 6 months f/u giving us a mean WL of 30.3kgs for all RYGB. The mean WL was 10.6kgs, 38.9kgs, 35.8kgs for GB, SG and MGB respectively. We calculated WL of the patients with unrecorded weights at f/u using these means. Total weight loss in 2599 patients was 70719.4kgs! Which equates to 155,910 pounds or 636,474,600 calories.

Conclusions: We believe that bariatric surgery may be contributing to the rising of the North and sinking of the South of Britain.

OP.551**EFFECTS OF LAPAROSCOPIC GASTRIC BAND APPLICATIONS ON ISCHEMIA MODIFIED ALBUMIN AS AN INDICATOR OF OXIDATIVE STRESS IN MORBIDLY OBESE PATIENTS.**

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Background: Obesity has become a public health problem in many countries and there is evidence which indicates that inflammation and oxidative stress play a key role in the pathogenesis of this disease. We evaluated associations between ischemia-modified albumin (IMA), advanced oxidation protein product (AOPP), total antioxidant capacity (TAC), pro-oxidant antioxidant balance (PAB) levels and weight loss before and 1 and 6 months after laparoscopic adjustable gastric banding (LAGB) in morbidly obese patients.

Method: The study group consisted of 20 patients who were operated for morbid obesity and the control group contained 20 healthy, normal-weight subjects. Plasma IMA, AOPP, TAC and PAB levels were determined spectrophotometrically.

Results: Plasma IMA, AOPP, and PAB levels were significantly higher and TAC were significantly lower in morbidly obese patients than in controls. BMI and HOMA-IR were positively correlated with plasma IMA and AOPP levels. One and 6 months after the LAGB operation, plasma IMA, AOPP and PAB levels were decreased and TAC were elevated following weight loss.

Conclusion: As a result; oxidative stress was increased and antioxidative defense was decreased, which resulted in increased levels of IMA, a biomarker of ischemia, in morbidly obese subjects. LAGB prevents oxidative stress in morbidly obese subjects. Our results suggest that LAGB might have a protective effect in morbidly obese subjects under high risk of ischemia.

OP.565**ANEMIA BEFORE AND AFTER BARIATRIC SURGERY: PREVALENCE AND EVOLUTION ON LONG-TERM FOLLOW UP**

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Background: Anemia due to iron deficiency or inflammatory state is often associated to obesity. Bariatric surgery is responsible for increasing iron deficiency but the weight loss decreases the inflammatory state of the patient. The objective of this study is to investigate the prevalence and causes anemia before and after bariatric surgery for severe obesity in a 5-year follow up.

Methods: Retrospective study, with electronic record analysis of obese patients submitted to open Roux-en-Y gastric by-pass, in which laboratory data were collected up to 60 months after surgery. Diagnosis and classification of anemia were done according to hemoglobin levels, serum ferritin and transferrin saturation.

Results: Mean BMI before surgery: 47,6. Preoperatively, 8,8% of patients had anemia (93,2% mild), in which 43,8% were due to chronic disease. After 24 months there was a progressive increase of iron deficiency anemia (72,4%) and decrease in anemia due to chronic disease (15,5%) and mixed (12,1%), with maintenance of this profile during long-term follow-up.

Conclusions: Anemia is very frequent in obese patients and must be investigated both before and after bariatric surgery. The cause of the anemia must be determined in order to use the best treatment available. We observed a reduction in the prevalence of chronic disease anemia during long-term follow up, probably due to improvement in the systemic inflammatory state.

OP.566**THE SLEEPING REMNANT**

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Introduction: The endoscopic inaccessibility of the excluded stomach after Roux-en-Y gastric bypass (RYGB) still represents an unsolved issue for this kind of procedure. The aim of this study is to evaluate the morpho-functional modifications of the gastric remnant by using an immunoenzymatic test already validated for non-bariatric patients: the GastropanelTM.

Methods: A cohort of 20 patients submitted to RYGB was prospectively enrolled and evaluated preoperatively, at 3 months and 3 years postoperatively. In addition to Gastropanel data (Pepsinogen I - acid production marker-, Pepsinogen II-inflammation marker-, Gastrin 17-reflux marker- and anti-Hpylori antibodies), biometrical and clinical data were registered. Statistical analysis was performed utilizing a general linear model.

Results: We registered a significant reduction in pepsinogen I (55.78-27.75-21.87, p: 0.03) and gastrin 17 (10.84-1.16-0.79, p: 0.04), while pepsinogen II showed a non-significant early reduction (4.58-3.06-4.05).

Conclusions: RYGB offers a unique way to represent a model of “sleeping remnant”, by abolishing the gastric stimulus to produce both acid and pepsin as well as gastrin-17.

In fact, the remnant is virtually excluded from the food passage and then the gastric phase of acid secretion – responsible for more than 50% of the total acid production - results as being completely cancelled. From this viewpoint, the fall in gastric production can hardly be considered as a precancerous condition, the gastric mucosa being unexposed to carcinogenic agents.

OP.568

RISK OF VENOUS DISEASE IN MORBID OBESITY

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Objectives: Multiple studies have shown a relationship between obesity and venous thrombosis, but the overall effect of obesity on the lower extremities venous system is not well described. We conducted a retrospective review, based on objective venous imaging of morbidly obese patients to better understand this relationship.

Methods: Obese patients (BMI over 30) seeking bariatric surgery underwent venous imaging. Imaging of the Femoral-popliteal (FP) and Tibioperoneal veins (TP) and the superficial system was performed. Because of body habitus some studies were limited. Evidence of venous disease included changes attributable to acute or chronic thrombosis, insufficiency/reflux or the presence of varicosities (VV).

Results: There were 971 patients in this series for a total of 1940 legs. 97% had BMI's greater than 35. There were 259 males and 712 females. Ages ranged from 16 to 73 years. Mean BMI was 45.4 Kg/M2. Limited studies were 0.98% in FP and 3.9% in TP. There were 4 positive changes in FP and TP (0.21%) and 11 reflux/insufficiency (0.57%). There were 20 reflux/insufficiency and 5 VV's in the superficial system (1.29%).

Conclusion: The incidence of all types of lower extremities venous disorders in this patient population was low. It contradicts the conventional dictum that obesity is a significant factor in venous disease and adds another element in the controversy as to whether obesity entails the need for extra measures beyond what is indicated for the rest of the surgical population.

OP.571

RESECTION OF GASTROJEJUNAL DIVERTICULUM AFTER ROUX-EN-Y GASTRIC BYPASS

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Background: Laparoscopic revisional surgery after previous open gastric bypass can be technically challenging. This video demonstrates the laparoscopic repair of an anastomotic diverticulum - a rare complication of Roux-en-Y gastric bypass.

Methods: The initial bypass operation was performed in an open technique, resulting in significant adhesions. After adhesiolysis, the diverticulum was resected and the dilated pouch was revised with preservation of the prior gastrojejunal anastomosis.

Results: The patient tolerated the procedure well. There were no complications with the surgery and the patient was sent home on postoperative day 1, tolerating a liquid diet. Postoperative esophagram confirmed normal post Roux-en-Y gastric bypass anatomy. On postoperative day 35, the patient is doing well and tolerating a regular diet.

Conclusions: This video demonstrates the repair of a late and rare complication of gastric bypass, namely gastrojejunal anastomotic diverticulum. Despite significant adhesions and complex postoperative surgical anatomy, the case was completed entirely laparoscopically.

OP.587

ONE ANASTOMOSIS GASTRIC BYPASS AS A SINGLE STAGE PROCEDURE IN SUPER OBESE PATIENTS.OUTCOMES AT 2 YEARS

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Background: The ideal management of super obese (SO) patients is still controversy and unclear. Data from the literature suggest good results with malabsorptive procedures (BPD,BPD/DS) as well as sleeve gastrectomy and gastric bypass. The purpose of the study is to analyze the outcomes of a series of 25 patients who underwent to a One Anastomosis Gastric Bypass (AOGBP)

Methods: A prospective data base of 25 SO patients (whit BMI from 50 to 71 kg/m²) who underwent OAGBP was accessed. Data regarding demographics, operative time, hospital stay, complications and weight loss was collected. Follow up was done at 1, 3, 6 months, 1 and 2 years.

Results: All procedures were performed laparoscopically whit no conversion to open surgery. Mean operative time was 90 minutes. Mean hospital stay was 4 days. No intraoperative complications and deaths occurred. Excess weight loss at two years was 64.4%

Conclusions: OAGBP shows good results as a single stage treatment in SO patients. Longer term results are awaited

OP.591

SIMULTANEOUS LAPAROSCOPIC GASTRIC BAND REMOVAL AND SLEEVE GASTRECTOMY

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Background: Revision procedures after laparoscopic adjustable gastric band (LAGB) placement are often necessary in cases of severe band-related complications, inadequate weight loss or weight regain. Simultaneous (single-stage) gastric band removal and sleeve gastrectomy seems to be a safe procedure in experienced hands, while others support the two-stage procedure.

Methods: We present a case of a 41 year-old male with insufficient weight loss after LAGB placement (Body Mass Index 55.6 kg/m² before definitive revision operation). He had underwent two operations of gastric band placement. The first gastric band developed slippage and the second one infection without erosion. A single-stage removal of the band and sleeve gastrectomy was performed. We describe the technique of this single-stage conversion. Nine patients in our institution had underwent this one-stage revision, at the period 2012-2014, with no major complications. Four trocars are used: one 10 mm-trocar is inserted approximately 10cm below the xiphoid process in the midline, one right subcostal of 10mm for liver retraction and another two trocars of 5mm and 10mm at the midclavicular lines bilaterally.

Results: No postoperative complications were mentioned and the patient was discharged three days after surgery. Weight loss in the first six months was 60% of his excess weight.

Conclusions: Single-stage laparoscopic gastric band removal and sleeve gastrectomy for morbid obesity seems to be safe and efficient, especially in cases of absence of gastric erosion. Inflammation and foreign body reaction make the procedure more demanding, leading to a prolonged learning curve.

OP.592

LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS LAPAROSCOPIC GASTRIC GREATER CURVATURE PPLICATION A PROSPECTIVE RANDOMIZED COMPARATIVE STUDY

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Background: Laparoscopic sleeve gastrectomy (LSG) involves resection of a significant portion of the stomach. Laparoscopic greater curvature plication (LGCP) is a relatively new alternative procedure similar to LSG but without the need for gastric resection.

Methods: Fifty patients met the National Institutes of Health criteria and were randomly assigned to receive either LGCP (n = 25) (16 female/9 male) with a mean age of 32.1 years (19 to 49) and mean BMI of 47.8 kg/m² (42 to 57) or LSG (n = 25) (18 female/ 7 male) with a mean age of 34.8 (18 to 58) and mean BMI of 46.8 kg/m² (41 to 55) by a block randomization method. Patients studied in terms of postoperative weight loss, changes in hypertension, HbA1c and postoperative complications.

Results: All procedures were completed laparoscopically. Follow up was 24 months. The mean hospital stay was 36 h (range from 24 h to 144 h) for both groups. No intra-operative complications occurred. Post-operatively, one case of minor leak detected after LSG and two cases of stenosis following LGCP. All patients experienced post-operative excess weight loss and improvement in HbA1c. The

improvement was significantly better in LSG group regarding BMI change (mean 14.45 compared to 10.35 in LGCP), change in HbA1c (Mean 1.2 compared to 0.5 in LGCP), the change in hypertension was not statistically significant.

Conclusions: LGCP is feasible, safe, and effective but has inferior weight loss effect and less effect in diabetes as compared to LSG for morbidly obese patients with BMI above 40 but long term results are still investigational.

OP.593

WEIGHT REGAIN AFTER GASTRIC BYPASS: WHERE TO GO NOW?

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Background: Gastric bypass remains one of the most effective procedures in bariatric surgery, but weight regain is occasionally observed. Revisional surgery proves both challenging and controversial. The aims of the procedures are improved restriction (gained with resizing of the gastric pouch or banding) or additional malabsorption (shortening of the common channel). An ideal procedure or combination of procedures still remains to be found and grave secondary complications like malabsorption occur.

Methods: Forty-one patients (6m, 35 f) underwent reoperations for weight regain (n=33), insufficient weight loss (n=5), or hypoglycemia (n=3) after gastric bypass. More than half of them (n=22) had had restrictive surgery before gastric bypass. Mean BMI at the time of revision was $47,9 \pm 9,6$ kg/m², the mean time to reoperation was 3,8 years.

In 41 patients, 16 bandings of the gastric pouch, 7 shortenings of the common channel and 3 resizings of the pouch were performed. Pouch banding was combined with shortening of the common channel in 7 patients and with pouch resizing in 2. In another 2 patients, the common limb was shortened together with resizing of the pouch. Finally, 3 patients underwent a combination of pouch resizing, banding and shortening of the common channel.

Results: Improved excessive weight loss was seen in 35 patients. However, seven patients underwent further surgery because of epigastric pain, reflux, or protein malnutrition.

Conclusions: Improved excessive weight loss was seen in 35 patients. However, seven patients underwent further surgery because of epigastric pain, reflux, or protein malnutrition.

OP.595

REINFORCED HIATOPLASTY WITH ABSORBABLE SYNTHETIC MESH AND CONCOMITANT LAPAROSCOPIC SLEEVE OR RE-SLEEVE GASTRECTOMY

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Background: Gastro-esophageal reflux disease (GERD) and Hiatal Hernia (HH) are common and challenging problems in morbidly obese patients. SAGES guidelines recommend the repair of hiatal defect during bariatric procedures without indication of a standard surgical technique.

Methods: We present three different cases of hiatal hernia repair in morbidly obese patients managed by three different techniques. Two of them were during primary laparoscopic sleeve gastrectomy (LSG) the last one was hiatal hernia after previous LSG.

Results: There was good symptom control assessed clinically by Rome III questionnaire and endoscopically without signs of esophagitis in the three patients.

Conclusions: There are various surgical options to treat GERD and HH in morbidly obese patients. However, we need larger number of obese patients to assess the best strategy tailored for every patient.

OP.606

ROUX-EN-Y GASTRIC BYPASS AFTER FAILURE OF SLEEVE GASTRECTOMY AND ADJUSTABLE GASTRIC BANDING

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Background: At the present time, the only operation that appears to satisfy expectations on both the short and the long term is the gastric bypass (RYGB). The laparoscopic adjustable gastric band (LAGB) emerged in the early 1990s following the rapid development of laparoscopic surgery. It is a simple restrictive procedure that may be reversed in case of intolerance or failure. Nowadays the long-

term results are well documented. In contrast with its effectiveness in term of weight loss on the short period, the LAGB faces a failure on the long term, sometimes associated to complications like gastric erosion and slippage. Sleeve gastrectomy is another restrictive procedure that has gained popularity due to the easy technique and to the excellent weight loss on the short period. On the other hand, results on the long term are still being assessed and discussed. The insufficient weight loss or weight regain and the intractable severe reflux are the main causes of failure after sleeve gastrectomy.

In case of failure of sleeve gastrectomy as well as of LAGB, a conversion to RYGB seems equally the most appropriate procedure to choose.

Methods: We considered 12 patients who underwent conversion of sleeve gastrectomy to RYGB and 26 patients who underwent conversion of LAGB to RYGB from 2011 to 2014.

All patients who had a sleeve gastrectomy presented either an insufficient weight loss, or an important weight regain. One of them had a related major gastro-oesophageal reflux not respondent to the pharmacological therapy with high dose of PPI. This sample group of patients presents a mean age of 42.08 years and a mean BMI of 39,89 Kg/m².

All the patients who underwent a LAGB presented either an insufficient weight loss, or an important weight regain. This sample group of patients has a mean age of 39.96 years and a mean BMI of 38.97 Kg/m².

We evaluate the results after RYGB post LAGB and post sleeve gastrectomy in term of percentage of excess of BMI loss (%EBL) and improvement of the associated comorbidities.

Results: The group of patients who underwent a sleeve gastrectomy registered a significantly improved weight loss after conversion with a mean percentage of excess of body mass index loss (%EBL) of 38,66 % at the 6-month follow up, and at of 56,36 % at the 12-month follow up, versus 33,74 % before conversion.

The group of patients who underwent a LAGB presented an even more markedly significant improved weight loss after conversion with a mean percentage of excess of body mass index loss (%EBL) of 52,81 % at the 6-month follow up, and at of 64,46 % at the 12-month follow up, versus -23,85 % before conversion (weight regain).

The difference in the percentages of excess of body mass index loss (%EBL) between the groups at 6 months was statistically significative (52,81 vs 38,66 p=0,05). At 12 months no statistical difference was found between the 2 groups (64,46 vs 56,36 p=0,42)

Relating to the comorbidities (hypertension, type 2 diabetes, dyslipidemia and OSAS on treatment), 12 patients suffered from hypertension at the moment of the RYGB operation and 7 of them were still on medications 12 months after surgery (recovery rate of 41,67%); out of 9 patients suffering from type 2 diabetes before the RYGB, only 2 were still on medications 12 months after surgery (recovery rate of 77,78%); out of 8 patients suffering from OSAS, 6 of them were still on treatment 12 months after surgery (recovery rate of 25%); out of 7 patients presenting dyslipidemia before the RYGB, only 1 was still on treatment 12 months after surgery (recovery rate of 85,71%).

Conclusions: According to our experience after failure of sleeve gastrectomy or LAGB due to insufficient weight loss or weight regain, conversion to RYGB proved to be a feasible and effective procedure. The results at 12 months after surgery are comparable for RYGB post-LAGB and post-sleeve gastrectomy. In both cases the percentage of excess of body mass index loss (%EBL) was superior to 50% (64,46% vs 56,36% p=0,42).

In parallel to the weight loss RYGB guarantees a certain recovery from the obesity-correlated comorbidities as hypertension, type 2 diabetes, dyslipidemia and OSAS.

The high number of patients who underwent LAGB and the increasing number of patients undergoing sleeve gastrectomy will lead to an increasing amount of conversion to RYGB. In these cases RYGB becomes a revisional bariatric surgery that needs to be performed in specialised centres.

OP.613

THE ROLE OF SURGERY AGAINST THE RISING TIDES OF OBESITY AND METABOLIC DISEASE IN OMAN- THE VIEW FROM THE ROYAL HOSPITAL IN MUSCAT

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Background: Oman with a population of 3.8 million stands within the same rising tides of Obesity and Metabolic disease in the Arabian Gulf. According to the WHO 37% of females and 22% of males above age 40 are morbidly obese. Metabolic syndrome is seen in 35%. The Royal Hospital in Muscat is the biggest tertiary teaching centre in Oman. The Upper GI unit started its Bariatric services in 2012 subsequent to setting the platform for advanced laparoscopy two years earlier. The aim was to explore the evolution of the service with emphasis on challenges, outcomes and future outlooks.

Methods: Retrospective study from a prospective data base of all Bariatric procedures done between 2012 and Dec 2014. Statistical analysis was done using SPSS16

Results: 99 cases of Sleeve Gastrectomy were done. Average pre-op weight of 120kg and BMI of 48 came down at 2 years follow up, to 75 kg and 30 respectively. There were no mortalities, no conversions, no anastomotic leaks, and no stenoses. Deranged FBS was in 34% of the group in whom resolution of Diabetes was in 85%.

Conclusions: The current station shows an encouraging trend with positive early results in both weight loss and resolution of Metabolic problems. Sleeve Gastrectomy is a good option in Oman due to high Gastric cancer prevalence and the need to access the remnant

stomach. Three years after initiating the service, the endeavor to catch up with increasing demand is challenging current resources though the odds are constantly being met head-on.

OP.618

CONVERSION OF FAILED LAGB TO LSG, THE COMMON BARIATRIC REVISION OPERATION FOR THE NEXT DECADE?

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Background: Over the last decade, the laparoscopic adjustable gastric banding (LAGB) was the most common operation in bariatric surgery. Years after, we see a high rate of patients regaining weight, problems in daily life (eating, slippage). The intention of our review was to see, if the conversion from LAGB to a laparoscopic sleeve gastrectomy (LSG) is feasible, which complication you have to deal with and if patients could loose weight again without having new problems.

Methods: We retrospectively analyzed 15 patients of our department from 2010-2015, who showed up at our ward because of regaining weight, eating problems and the wish for another method of bariatric surgery. We regarded the operation time, time of hospital stay, complications and weight loss in the follow up.

Results: In the last 6 years, 15 patients (12 ♀, 3 ♂) underwent a conversion of LAGB to LSG at our department. The median op-time was 130,8 min (69-175), the average hospital time was 7,4 days (5-19). The median weight loss was 11kg (1-20), we had one major complication (combined splenic rupture and gastric suture leakage) and two minor (subcutaneous hematoma, dehiscence of wound). 4 patients reported intermittent reflux symptoms. One patient regained weight and was later converted to a gastric bypass.

Conclusions: The conversion of a LAGB to a LSG is a feasible procedure with good postoperative outcome and a good patient acceptance.

OP.634

DUTCH COMMON CHANNEL TRIAL (DUCATI). STUDY PROTOCOL AND EARLY RESULTS

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Background: Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is currently considered one of the most effective bariatric procedures. Although this technique has been applied for years, the optimal length of the different limbs is still not clear. In various studies investigators suggest that the length of the common channel is an important parameter in achieving optimal %EWL after LRYGB. The objective of this trial is to investigate the optimal length of the common channel in LRYGB surgery for morbid obesity. The study protocol and early results of procedure-related morbidity will be discussed.

Methods: The primary objective is to evaluate whether very long roux limb gastric bypass (VLRLGB) is superior in terms of %EWL after one year follow up compared to standard LRYGB. The trial is a multi center prospectively randomized controlled trial in which patients are 1:1 randomized for A) VLRLGB and B) standard LRYGB. A total of 444 patients will be included and will be followed for at least 1 year.

Results: So far 91 patients have received VLRLGB and 87 patients standard LRYGB. In the VLRLGB group 3 patients (3%) have had a re-laparoscopy for complications. Early results (6 months) concerning weight loss show no significant differences between both groups with a 63% EWL in the VLRLGB group and 65% EWL in the standard LRYGB group. So far no severe metabolic deficiencies have been found.

Conclusion: The VLRLGB seems a potentially suitable option to improve the results after LRYGB. Early results so far show no reasons for concern considering early morbidity and early metabolic deficiencies.

OP.655

LEAVING THE BAND IN PLACE IN CONVERSION FROM GASTRIC BAND TO ROUX-EN-Y GASTRIC BYPASS

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Background: The laparoscopic Roux-en-Y gastric bypass (RYGBP) is the most common performed bariatric surgery after failed Laparoscopic Adjustable Gastric Banding (LAGB). Studies have reported failure rates of 30-35 % in LAGB and 15% in RYGBP. To add restriction an adjustable band can be placed around the gastric pouch. The aim of this study is to present a video and our experience in revision of LAGB to banded RYGBP, leaving the band in place.

Methods: We present a video performing a banded RYGBP after a failed LAGB. The band is carefully opened, the gastrogastric sutures are meticulously divided and the fibrotic ring is removed. In this case the band is left in its original tunnel. We performed a fully stapled RYGBP with careful selection of the area to perform a circular gastro-enterostomy. At the end of the procedure, the band is closed around the gastric pouch and it is fixed with 3 non-absorbable sutures between the remnant stomach and the pouch. The band was not insufflated.

Results: Between January 2008 and January 2015 a total of 18 patients underwent revision of LAGB to banded RYGBP. No mortality or major morbidities were observed.

Conclusions: Performing a RYGBP after failed LAGB with leaving the band in place is a feasible option in selected patients with a BMI over 45. Preliminary results show no comorbidities. Weight loss on the long term still needs to be evaluated.

OP.663

LAPAROSCOPIC SLEEVE RESECTION OF THE DILATED POUCH FOR RENEWED WEIGHT GAIN AFTER ROUX-EN-Y GASTRIC BYPASS

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Background: Renewed weight gain after Roux-en-Y Gastric Bypass (RYGB) due to a dilated gastric pouch is a known phenomenon. Sleeve resection of the pouch is proposed as a surgical option. In this limited study we assessed safety, feasibility, short term weight loss results and patient satisfaction.

Methods: Retrospective analysis of prospectively collected data was performed for patients undergoing sleeve resection of the dilated pouch after RYGB between 01-01-2000 and 05-02-2015. Analysed data included gender, Body Mass Index (BMI), surgical specifications and complications and %Excess Weight Loss (%EWL) up to 1 year after surgery. Follow-up data and patient satisfaction were maximized by telephone interviews.

Results: 4 patients were identified (3 women, 1 man). One patient underwent simultaneous regastro-enterostomy and one patient had a hiatal hernia repair. All patients underwent laparoscopic intervention. No complications were encountered. Mean BMI at the time of RYGB was 39.5 kg/m² (range 38.5-40.3), and 35.5 kg/m² (range 34-37) at the time of the sleeve resection. Average time between RYGB and sleeve resection was 6.8 years (3.4-11,0). Mean follow-up was 11 months (4-13). 2 patients underwent open RYGB. EWL 6 months and 1 year after surgery was respectively 15% and 20%. Satisfaction survey was moderate: 50% of all patients would repeat the sleeve resection.

Conclusions: Sleeve resection of the dilated pouch after (open) RYGB is feasible and safe. Short term weight loss and satisfaction is however moderate.

OP.691

INTERNAL HERNIA AFTER ROUX – Y – GASTRIC BYPASS

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Background: The occurrence of internal hernias (IH) has increased with laparoscopic Roux-en-Y gastric bypass (RYGBP) due to less postoperative adhesions. Intestinal occlusion by internal hernia is not a rare complication after RYGBP with high morbidity and mortality. Patients with intermittent abdominal pain, nausea, or vomiting need to be carefully evaluated. These herald signs of internal herniation should promptly require early surgical evaluation.

Methods: A retrospective review of a prospectively collected bariatric database was performed for patient diagnosed with internal hernia after RYGBP performed at our center between 2009 and 2013. In all patients the mesenteric and Petersen's spaces were closed with non-resorbable suture. Demographics, initial body mass index (BMI), detailed weight loss curves, clinical presentation and radiological studies were reviewed. The need for bowel resection and morbidity, specifically related with IH were analyzed.

Results: 17 patients developed an internal hernia (2.87 %) out of 592 patients who underwent RYGBP. There were 3 men and 14 women with mean age of 37.9 years (range 21 -53) and a mean initial BMI of 44.1 (range 39-53). IH was diagnosed at a mean interval

of 2.18 (range) years after RYGBP with a mean BMI of 32.8 (range 25–43). 13 patients were admitted in emergency setting with acute pain (11 cases – 84.61%) and vomiting (7 cases – 41.18%). The remaining four patients were evaluated for chronic abdominal pain. Ten patients (58.82 %) underwent CT scan, which confirmed the diagnosis in 5 patients. All but one patient, 16 patients underwent laparoscopic exploration with 1 conversion due to hemodynamic instability. In only two patients bowel resections was required because of severe bowel ischemia. Morbidity and mortality were nil.

Conclusions: Internal hernia after RYGBP can present either acutely with pain and obstructive symptoms or chronically with vague, intermittent postprandial pain and should swiftly be ruled out. The CT scan is not always predictive for IH. In case of clinical suspicion despite negative CT scan, surgical exploration should be performed with no further delay.

OP.688

EVALUATION OF MICRONUTRIENTS IN OBESE PATIENTS UNDERGOING SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background: Sleeve Gastrectomy (SG) can lead to decreased nutritional disorders by not altering intestinal transit. The nutritional impact through serum levels of micronutrients in obese patients undergoing SG was evaluated and compared with patients undergoing Roux-en-Y gastric bypass (RYGB).

Methods: A retrospective study of 338 patients after SG and 238 patients after RYGB. Serum levels of hemoglobin, iron, ferritin, zinc and vitamin B12 were measured in the pre and postoperative period

Results: The means of the following elements were significantly different: iron serum levels, at 12 and 24 months, irrespective of the BMI (SG>RYGB); ferritin serum levels, until the 6th month (SG>RYGB); zinc, at 6,12 and 24 months (SG>RYGB). The difference in vitamin B12 was not significant. After 24 months anemia levels were 24% following SG and 40% following RYGB; Iron deficiency was 6.6% and 15% in the SG and RYGB groups; Ferritin deficiency increased notably in the follow-up, did not differ significantly between the two groups (17.8% SG x 23.7% RYGB); the prevalence of zinc deficiency was 6.6% after SG and 30% in RYGB; the prevalence of hypovitaminosis B12 was 6.6% after SG and 8.7% after RYGB. Excess weight loss was significantly higher after SG. These values were reversed in favor of RYGB after 24 months.

Conclusions: After 24 months the SG group had higher levels of zinc and iron, with a lower prevalence of zinc deficiency. Patients undergoing SG had greater %EWL until the 6th months, with these values being reversed in favor of RYGB.

OP.704

NUTRITIONAL IMPLICATIONS OF PREGNANCY AFTER GASTRIC BYPASS SURGERY: MATERNAL AND FETAL ASPECTS

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Background: Gastric bypass (RYGB) beneficially influences over much of the typical comorbidities in obese women, particularly on fertility. Pregnancy after surgery must be carefully monitored because of the risk of malnutrition and development of nutritional deficiencies for both the mother and fetus health. To assess the major nutritional issues related to pre-gestational and gestational periods in women undergoing bariatric surgery and their respective newborns.

Methods: Cross-sectional observational study, with 15 women held at a public hospital in a public hospital in Brasília, Brazil. Data were collected using a questionnaire and personal interview for data collection of preoperative, pregnancy and child birth.

Results: The women studied after surgery no comorbidities, the interval between surgery and pregnancy was on average 18.1 ± 13.3 months, gestational weight gain was 86.6% did not exceed 11.5 kg, was only one case of iron deficiency anemia without other nutritional deficiencies detected, there were no cases of complications during pregnancy, 80% of infants born appropriate for gestational age (AGA) and all were born without complications or disabilities.

Conclusions: Bariatric surgery after pregnancy has been shown to be safe for both the mother and the fetus, provided it is accompanied appropriately. The RYGB may reduce the risk of developing complications during pregnancy, as well as a positive influence to the fetus, according to gestational age, birth weight and lower risk of complications at birth.

OP.708**AGE AS A RISK FACTOR FOR THE SURGICAL OUTCOME OF LAPAROSCOPIC GASTRIC BANDING**

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Introduction: The prevalence of obesity is constantly increasing, as well as the elderly population, which is steadily growing, and the obesity epidemic does not skip over this part of the population. Bariatric operations have proved as an effective measure for weight reduction and for long term maintaining of the lower weight that have been achieved. The experience and research knowledge in regard to the safety and efficacy of LAGB in the elderly population for the long term are lacking.

Methods: In the current study we have tried to estimate the benefits against the risks of this procedure in the 65+ age group, and by that to determine its' worthwhileness. This is a retrospective cohort study that compared the safety and effectiveness of LAGB among a case group which was operated at the age of 65+ in comparison to a control group which was operated at the ages of 18-65.

Results: 226 patient were enrolled to the research, from which 59 (26.2%) belonged to the research group and 166 (73.8%) to the control group. The mean follow-up period after the surgery was 4.49 years for the research group and 6.37 years for the control group ($p < 0.001$). The mean BMI change following the surgery was a reduction of 12.7 [kg/m²] and was similar at both subgroups. As to excess body weight loss percentage, the research group was characterized by a lower mean excess body weight loss percentage in comparison to the control group, with 54% and 60% reduction of excess body weight respectively ($p = 0.029$). The improvement seen in the control group was more significant than that of the research group in regard to diabetes ($p < 0.001$) and hypertension ($p < 0.001$).

Discussion: LAGB results in a substantial loss of weight for the long term among the elderly. Although the excess body weight loss percentage is lower in the elderly, still the loss of weight results in markedly improvement in morbidity and quality of life. Complication rate in the elderly is similar to the complication rate in younger patients. LAGB is an efficient and safe surgery for treating obesity in the elderly, and its' advantages overcome its' risks.

OP.711**COMBINED ABDOMINOPLASTY AND GASTRIC BYPASS FOR OBESITY ASSOCIATED WITH MASSIVE PANNICULUS**

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Background: Massive excess skin can be associated to obesity and in addition to its devastating psychosocial impact, it may also be the origin of medical comorbidities, such as intertrigo and functional disabilities. Treating this condition is a challenge for surgeons and although a combined procedure with bariatric surgery in one operation is preferable for the patient and is more cost-effective, it is related to higher morbidity.

Methods: We report the clinical case of a 67-year-old woman with a BMI of 64 kg/m² (weight 170 kg). Her main comorbidities included type 2 diabetes mellitus, hypertension, hypercholesterolemia, chronic renal disease, and obstructive sleep apnea. She also has got a huge external panniculus which is impairing her mobility and is giving her severe back pain resulting in a devastating effect on her quality of life. Her previous surgeries include open appendectomy and cholecystectomy. Preoperatively, she had an IVC filter inserted because of high risk of thromboembolism.

Results: In combination with plastic surgery, the patient underwent an abdominoplasty excising 27 kg of pannus, followed by a laparoscopic roux-en-y gastric bypass with a 100 cm alimentary limb. Despite her comorbidities, the patient tolerated the procedure well and was discharged home without any complications. She did not have any particular morbidity during the first 2 months after her operation.

Conclusions: Abdominoplasty can be a feasible and safe approach in combination with bariatric surgery in properly selected patients and carefully optimized prior to their surgery in a multidisciplinary team approach.

OP.717**DUMPING IN CONVERSION OF FAILED RESTRICTIVE SURGERY: THE GOOD, THE BAD OR THE UGLY.**

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Introduction: Early dumping is currently seen as a negative side effect of roux-en-y gastric bypass (RYGB), although it also helps patients to stick to their prescribed diet, avoiding sweets and sugars.

Objectives: In this study we assess the role of dumping on weight loss in patients with conversion of failed restrictive surgery into RYGB.

Methods: Ninety-three consecutive patients, who had RYGB between 2006 and 2011 because of inadequate weight loss or band intolerance after gastric banding/McClean (ASGB), were analysed. Percentage excess weight loss (% EWL) was used to objectify weight loss. The Sigstad clinical diagnostic index was used to assess dumping syndrome.

Results: Fifty-five patients (59.1%, mean age 43.0±10.8) were found to suffer from dumping. Overall, dumpers showed a greater %EWL than non-dumpers (83.8±48.0% vs 66.9±44.1% respectively, $p=0.0725$). When RYGB was performed because of inadequate weight loss following ASGB (%EWL <50% after 12 months), dumping played a key role on weight loss (88.0±21.2% vs 68.9±34.5%, $p=0.0137$). This effect positively correlates to post-ASGB body mass index (BMI) with a statistically significant result at BMI > 35kg/m² (82.4±15.7% vs 58.4±32.4%, $p=0.00341$).

Conclusions: This study provides new insights in the effect of dumping on weight loss in patients with conversion of failed restrictive surgery into RYGB. We believe early dumping in this patient group helps them to achieve a desired diet behavior modification and is as such a positive side-effect rather than a complication.

OP.720

LONG-TERM RESULTS UP TO TEN YEARS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction: Laparoscopic sleeve gastrectomy (LSG) is an effective bariatric procedure with satisfying mid-term results regarding weight loss. Few studies report on its long-term outcome.

Objectives: We assess the long term results regarding weight loss, complications and need for secondary bariatric surgery in a series of 100 laparoscopic sleeve gastrectomies.

Methods: A retrospective analysis on 100 consecutive patients who have undergone a LSG between January 2005 and March 2009 was performed. Weight evolution after the procedure was analyzed and expressed in terms of % excess weight loss (%EWL). Moreover, the evolution of reflux disease with the use of proton-pump inhibitors and need for revisional bariatric surgery was examined.

Results: We achieved a mean follow-up of 8.48 (6.1-10.3) years. A mean of 60.2%EWL was found. A significant increase in subjective reflux symptoms and PPI use was observed (respectively 18% and 16% preoperatively and 43% and 40% postoperatively). In our study, the likelihood of postoperative development of reflux symptoms is 44%. In the postoperative period, de novo PPI dependency was 25%. In thirty-eight patients (38%) secondary bariatric surgery (Laparoscopic Roux-en-Y Gastric bypass) was needed. Indications for the secondary procedure were insufficient weight loss (100%) and accompanying untreatable reflux disease (18.4%).

Conclusion: We obtained good long-term weight loss after LSG. On the other hand, a significant increase in reflux symptoms, PPI dependency and a high likelihood of secondary bariatric surgery was observed.

OP.724

THE EFFECT OF BARIATRIC SURGERY UPON HYPERTENSIVE PATIENTS 5-7 AFTER SURGERY

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Background: Laparoscopic Adjustable Gastric Band (LAGB) surgery is a known treatment for morbid obesity. In addition, this surgery is known to be effective in the treatment of the comorbidities of morbid obesity, and hypertension (HTN) and thus is indicated for the treatment of these diseases as well. This study is an historic cohort study about LAGB as the treatment of hypertension for long periods comparing the long term (5-7 year) effect of bariatric surgery upon hypertension status.

Methods: The list of patients was taken from the OR and the department's database. All of the patients in this study had HTN before the surgery and had the surgery 5-7 years prior to the day of the interview. The patients were interviewed by a set of questionnaires, which included questions about their demographics details, health condition prior and after the surgery and a quality of life evaluation.

Results: 141 people participated in the study, 97 of them were females (69%). Average time since the surgery was 6.3 years (±3.3). The average systolic blood pressure (BP) before surgery was 174 (±28 mm Hg), which was significantly lower ($p<0.001$) than the BP at the

day of the interview which was 125 (± 12). The number of hypertensive drugs taken for HTN decreased from 1.6 (± 1.02) to 0.98 (± 0.94), a decrease that was highly significant ($p < 0.001$).

Conclusion: We have shown in this study that LAGB is an effective treatment for morbid obesity, as well as the comorbidities that comes with it - HTN, in a longer period of time than was proven until this study. From this study we can conclude that LAGB as a treatment for Morbidly Obese patients who suffer from HTN is a long-term treatment that enhance their ability to have a balanced blood pressure for long periods of time.

OP.728

BACK TO REALITY: OPEN VBG TO LAPAROSCOPIC RYGB 20 YEARS LATER!

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Background: Although vertical banded gastroplasty (VBG) was endorsed by the 1991 National Institutes of Health Consensus Conference for the treatment of morbid obesity, it has largely been abandoned. The objective of the present study was to review laparoscopic conversion of VBG to Roux-en-Y gastric bypass (RYGB) for weight loss or dysphagia and gastroesophageal reflux.

Methods: A review of the procedure performed laparoscopically for significant symptoms and positive results. An open vertical banded gastroplasty for weight loss 20 years ago. This was complicated by oesophageal perforation managed conservatively. On and off symptoms since of vomiting and reflux. This is also associated with nausea and vomiting and a particularly bad episode of persistent vomiting for four to five days in June. Describes severe symptoms of acid reflux and heartburn and reduced appetite. Weight of 94 kilos with a BMI of 37 kg/m². No previous underlying other co-morbidities, diabetes and hypertension and not on any regular medications.

Results: Gastroscopy suggested grade 2 oesophagitis, Barium swallow showed presence of dysmotility and reflux and pH manometry shows evidence of significant reflux disease with a DeMeester score of 53.

A Laparoscopic VBG to Roux-en-Y Gastric Bypass was performed with extensive adhesiolysis

Conclusion: The results have shown that 'laparoscopic' revision of VBG to RYGB is a feasible procedure that can provide acceptable weight loss and reversal of weight-related co-morbidities. Complications are common after revisional bariatric surgery.

OP.729

SURGERY FOR TYPE 2 DIABETES MELLITUS IN NON-OBESSE MODEL. STUDY OF A VARIANT OF ONE ANASTOMOSIS DUODENAL EXCLUSION IN THE GOTO-KAKIZAKI RAT.

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Introduction: bariatric surgery is the best option for obese patients with type 2 diabetes mellitus (T2DM) However, T2DM is an epidemic that increases even in people without obesity. Knowing the effects of surgery on non-obese diabetic models, it becomes necessary, because diabetic patients with BMI < 35 require answers to their metabolic condition.

Objective: to evaluate the effect of a variant of duodenal exclusion with omega loop gastrojejunostomy (DE) in a diabetic non-obese animal model.

Materials and methods: 18 rats underwent to the new technique, which consisted in a gastroplasty, preserving the stomach size; exclusion of duodenum of alimentary circuit and performing a gastrojejunostomy in omega loop. Another 18 rats underwent sham surgery. In both groups were compared the effects on weight and glucose metabolism.

Results: the weight was not affected by the surgeries. A decrease of hyperglycemia values with statistical significance ($p < 0.001$) was observed. Hyperinsulinemia values were corrected, and this could mean a recuperated counter-regulation mechanism of beta cells function. Nevertheless, the persistence of hyperglucagonemia means an alpha cell regulation out of the control of surgery. A moderate increase of GLP-1 is evident only in rats operated at early stages of the T2DM evolution ($p < 0.002$). No statistically significant changes were observed in the values of GIP, PYY or C peptide.

Conclusion: the de without gastric restriction, leads metabolic glucose control and do not affect to the body mass.

OP.734**THE DUODENAL EXCLUSION ALLOWS REGENERATION OF BETA CELLS REGARDLESS OF THE GLP-1 VALUES. EXPERIMENTAL SURGERY OF TYPE 2 DIABETES IN A NON-OBESE DIABETIC ANIMAL MODEL.**

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Introduction: Type 2 Diabetes Mellitus (T2DM) is a growing epidemic in the Western world, and sometimes, independent of the obesity degree. The conventional treatment modalities can to control blood glucose levels but cannot stop the progression of this disease. The functionality of the β cells tends to decrease gradually over time, even with proper medical treatment.

Objective: evaluate the effect of Duodenal Exclusion without sleeve gastrectomy (DE) in a diabetic not obese animal model. Materials and methods: 36 Goto-Kakizaki rats were operated (18 DE and 18 Sham) at different times (early, intermediate and late) of his growth.

Results: no weight loss in any group was observed. Reduction of glucose was evidenced in all subjects with DE. The postoperative glycaemia was reduced with statistical significance in all groups but was more important in early operation group ($p < 0.002$). The GLP-1 only was increased with statistical significance in DE group with early operation ($p = 0.005$). Despite the lack of influence of GLP-1 in rats operated in a middle and late time, regeneration of pancreatic beta cells was observed. Beta cell does not lose its capacity for regeneration with the progression of diabetes, but the inflammation and fibrosis arising from the disease adversely affect the rest of the pancreas tissue.

Conclusion: the DE in early form allows the recovery of glucose metabolism and stop the damage in pancreatic tissue.

OP.740**MID-LONG TERM RESULTS OF LAPAROSCOPIC GASTRIC PPLICATION**

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Background: Laparoscopic Gastric Plication (LGP) emerged some years ago with promising results and very low morbidity and mortality. Nowadays just a few groups worldwide included this procedure in their armamentarium. We evaluated our experience with this procedure at mid-long term.

Methods: Descriptive analysis of the prospective database of Bariatric Surgery. We indicated LGP for patients with low BMI and indication for a restrictive procedure. We evaluated weight loss, comorbidity resolution, morbidity and mortality.

Results: We included 42 patients. 31 women (75%) with mean aged of 42.78 years old (range 31 to 48). Mean BMI was 40.43 kg/m² (31-48). Weight loss at 12, 24, 36 and 48 months was 63.47, 59.45, 51.14 and 46.53% excess weight loss respectively. Median hospital stay was 3 days (2 to 10). 15 patients stayed more than 4 days due to complications (most of them nausea and vomiting). 3 patients needed reoperation due to complications. There was no mortality. Obesity-related diseases improved in 70% of the patients during the follow-up.

Conclusions: Gastric Plication is a restrictive bariatric procedure with moderate weight loss results at mid-long term after surgery. There is not significant evolution of the obesity related diseases. We found that even is considered an easy procedure, it requires a deputed surgical technique in order to achieve a good food tolerance without compromising weight loss.

OP.745**PRECISE LAPAROSCOPIC SLEEVE GASTRECTOMY GAINS BETTER RESULTS COMPARED WITH CONVENTIONAL LSG IN CHINESE OBESE PATIENTS**

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Background: Laparoscopic sleeve gastrectomy (LSG) is a simple bariatric procedure but may still have certain complications. It is important to refine existing methods and explore new techniques to improve the outcomes of patients. Precise LSG was introduced which modified the conventional LSG. This study is to investigate the efficacy and safety of precise LSG in treatment of obesity and metabolic diseases in Chinese populations.

Methods: Clinical and follow-up data of obese patients underwent PLSG in our department between 2011 and 2014 were analyzed retrospectively.

Results: A total of 120 obese patients were included in this study. All the precise LSG procedures were successfully performed with no conversion to open surgery or death cases. Average operation time was (56±10.2) minutes, postoperative hospital stay was (5.0±2.2) days. No severe complications were observed. Percentage of excess weight loss in 1, 3, 6, and 12 month after operation was (26.3±8.1)%, (50.4±7.5)%, (65.1±8.1)%, (79.6±9.1)%, respectively. The improvement rate of co-morbidities such as fatty liver, hyperlipidemia, hypertension and type 2 diabetes mellitus were 76.3%, 80.2%, 68.7% and 79.6%, respectively.

Conclusions: Precise LSG is safe and feasible. It did not substantially increase operating time, but decreased duration of hospital stay and the incidence of postoperative complications, while weight loss outcomes were significantly better than that in conventional LSG.

OP.755

SLEEVED GASTRIC BYPASS AND HIATAL HERNIA REPAIR

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Background: Association of morbid obesity and hiatal hernia is common and sometimes makes difficult the surgical technique choice and performance.

A 59 years old obese man (125 Kg, BMI 43 Kg/m²) was referred to our Unit with a big hiatal hernia and severe dyspeptic symptoms (pain, food reflux and intolerance, heartburn and pyrosis). Associated diseases were arterial hypertension, type 11 diabetes mellitus and a reactive depression, all under pharmacological treatment.

Methods: The hernia was documented by upper digestive XRay and thoraco-abdominal CT Scan showing herniation of more than half of the stomach, classified as a type 11. No esophageal manometry was done because of nasal incompatibility. The patient was proposed for laparoscopic hernia treatment plus sleeved gastric bypass. The later is one variation of single anastomosis gastric bypass we have been performing in patients under gastroesophageal reflux risk, with excellent outcomes.

Results: In this vídeo we try to show the different steps of the operation.

Although this association may be matter for disagreement between surgical teams this patient has had a very good evolution and has now 92 Kg (BMI 31,8 Kg/m²) and no dyspeptic complaints and all the medical associated diseases improved under reduced medication.

Conclusions: We conclude this association may be a reasonable indication for laparoscopic surgical treatment. The so called “Sleeved gastric bypass”, as variation of a one anastomosis gastric bypass with a Roux en Y diversion is an alternative technique.

OP.769

SURGICAL APPROACH FOR PERSISTENT MARGINAL ULCER AFTER BARIATRIC SURGERY

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Background: The Roux-en-Y gastric bypass is one of the most common procedures for weight-loss in bariatric surgery. There are various complications related some with late appearance. Marginal ulcers are one of these conditions that occur near the gastrojejunostomy and have different causes including ischemia, foreign material and excess acid in the jejunum from gastrogastric fistulas. The objective of this video is to demonstrate a laparoscopic surgical approach of a persistent marginal ulcer and its findings.

Methods: A 46-years-old woman with epigastric pain and vomiting after 4 years of Roux-en-Y gastric bypass was diagnosed with 2 marginal ulcers in an endoscopy exam. Medical management was attempted for 2 years with persistency of symptoms. Therefore, she was submitted to a video laparoscopic confection of a new gastrojejunum anastomosis maintaing the Roux-en-Y jejunal bypass previously done. No apparent cause for the ulcers was found.

Results: The patient presented a favorable postoperative outcome with resuming oral liquid ingest after 2 days of the surgery and being discharged after 4 days with no complains. In ambulatory follow up, she had complete remission of symptoms and normal oral ingest. Analysis from the specimen found only chronic inflammation.

Conclusions: Marginal ulcers are a possible late complication after some bariatric procedures. Surgical treatment is rarely needed and it is indicated when persistency of pain and recurrent bleeding after the initial attempt with clinical management. A video laparoscopic approach is a safe and effective procedure when surgical treatment is required.

OP.780

THE EFFECT OF LAPAROSCOPIC BILIOPANCREATIC DIVERSION MODIFIED WITHOUT GASTRECTOMY ON TYPE 2 DIABETES MELLITUS AND WEIGHT LOSS IN PATIENTS WITH BMI <32 KG/M2.

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Background: Metabolic surgery is a novel therapy for non obesity (BMI < 32 Kg/m²) in type 2 diabetes mellitus (T2DM) patients. Our aim was to analyze the remission of T2DM and impact on weight loss in patients with BMI < 32 kg/m² after laparoscopic biliopancreatic diversion modified without gastrectomy (LBPWG), described by Domene CE et al, 2005.

Methods: Data of 44 patients with BMI < 32 kg/m² who underwent LBPWG between 2009 and 2014 were collected from a retrospectively designed database. The laboratory resolution of T2DM was determined by fasting plasma glucose (FPG ≤ 100 mg/dl) and glycosylated hemoglobin (HbA1c ≤ 6%).

Results: The T2DM regression was observed in 94% of the patients with BMI < 32 kg/m² 1 year after LBPWG and 88% and 90% 3 and 5 years, respectively, after the operation. Normalization of average HbA1c and FPG was observed 6±4 months postoperatively. Changes in main markers of T2DM was observed independently of weight loss. BMI statistically decreased at 1 and 6 months, but did not reach statistical significance at 1, 3 and 5 years.

Conclusions: LBPWG improve glycemic control in T2 DM patients with BMI<32 without significant weight loss. A larger sample size and more constrictive inclusion criteria may be required for better evaluation.

OP.785

LAPAROSCOPIC ONE-ANASTOMOSIS GASTRIC BYPASS (LOAGB): 12 YEAR EXPERIENCE WITH 2600 PATIENTS

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Introduction: LOAGB was introduced as a modification of the mini-gastric bypass in order to enhance its safety and effectiveness (detailed description published by Carbajo MA, et al. *Obes Surg* 2005;15:398-404). Long term results with our initial 1200 patients was recently presented (*Obes Surg* 2014;24:1255).

Objectives: To report our whole series of patients submitted to OAGB during a 12 year period.

Methods: Prospectively collected database of 2600 consecutive patients submitted to LOAGB from 2002 to 2014; 58% without previous or simultaneous abdominal operations, 24% with previous operations, 16% with simultaneous operations, and 2% revisional procedures. Values are presented as mean (range).

Results: Demographics included age:43 y.(12-74), BMI:46(31-86) and EBW:65 kg(28-220). There were 4(0.2%) conversions. Length of stay in uncomplicated patients (99%) was 24 hours(15-120) and 9 days(4-32) for those with major complications. These prompted further operations in 20 and were solved conservatively in 10. Long-term complications occurred in 22(0.8%). One-year readmission rate was 0.8%. There were 3 deaths (0.1%) due to pulmonary thromboembolism, nosocomial pneumonia and disseminated intravascular coagulation. Postoperative %EWL was 84%, 88%, 81%, 79%, 77%, 70% and 69% at 1,2,3,4,5,10 and 12 years, respectively. Overall total or partial resolution of co-morbidities was achieved in 98% and 91% at 2 and 10 years, respectively. Endoscopic studies were planned for all those completing a 5 y. follow up and were done in 24%; no significant acute or chronic lesions were found. Quality of life was satisfactory in all objective parameters assessed postoperatively.

Conclusions: LOAGB seems to be a simpler operation with a shorter learning curve and very low morbidity-mortality. Due to its effectiveness (long term %EWL and resolution of comorbidities), outcomes should be compared to those attained with more aggressive and complex surgical options. LOAGB results in a high degree of satisfaction and has turned into a robust alternative in bariatric surgery.

OP.786

CATASTROPHIC MULTISYSTEM ORGAN FAILURE OCCURRING YEARS AFTER BARIATRIC SURGERY: A RECOGNIZABLE CLINICAL SYNDROME

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Background: We aim to report a recognizable syndrome of patients post-bariatric surgery who abruptly developed multisystem organ failure after a relatively simple surgical procedure or intercurrent illness.

Methods: Retrospective review of patients admitted for surgical procedures or unrelated illness who developed a sepsis-like syndrome in the absence of an identified source of sepsis. The presenting features and clinical course were analyzed.

Results: Nine female patients (age 27-68) presented a median of 10 (2-25) years after bypass surgery. Precipitating events were bypass reversal (5), gastrostomy placement (2) and respiratory tract infection (2). Clinical deterioration occurred 24-36 hours after presentation in the absence of an identifiable source of sepsis, characterized by hypotension and profound lactic acidosis, requiring mechanical ventilation and intensive cardiac support with multiple pressors in all, intra-aortic balloon pump in one and ECMO in one. Four patients died 2-12 days after onset, and five survived after a median hospital stay of 6 (3-10) weeks. The only permanent sequel was loss of portions of toes in one patient. Early administration of thiamine was given to the most recent five patients, and was associated with survival in four and temporary improvement in one. Since routinely administering thiamine preoperatively no further cases have been observed.

Conclusions: Patients may be at risk for life-threatening deterioration after simple illness or surgery many years after bypass, especially malabsorptive procedures. Supplementation of nutrition especially thiamine may help reduce its incidence or severity.

OP.789

INTERNAL HERNIA AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: PREDICTORS FOR EARLY SURGICAL CORRECTION

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Background: internal hernia is a possible complication after laparoscopic Roux-en-Y gastric bypass (LRYGB); early diagnosis is hampered by the nonspecific clinical presentation. This study aims to evaluate the predictive clinical factors for both early diagnosis and surgical correction of IH.

Methods: 38 patients with suspected IH and diffuse and postprandial abdominal pain were enrolled in a longitudinal ambidirectional study. Nonspecific abdominal pain, after ruling out other causes of abdominal pain through laboratory tests and imaging, led to exploratory laparoscopy as a diagnostic and therapeutic method for the correction of IH.

Results: 38 patients (28 men) with a mean age of 37.5 years and a mean of body mass index of 39,6kg/m² were evaluated. All of them experienced pain; 23 evolved with abdominal distension, 10 with nausea and 12 with vomiting. These patients presented with symptoms for 15 days on average. Seventeen patients (45.9%) were seen once, while the other 20 (54.1%) went to the emergency room twice or more. Exploratory laparoscopy was performed in all patients, being converted in 3 due to bowel distension; mean operative time was 45 minutes. Petersen's hernia was confirmed in 22 (57.9%). In seven patients, the herniated loop showed signs of vascular suffering, and two had irreversible ischemia, requiring bowel resection. All the patients had Petersen's space closed; the correction of IH occurred in 20 (52.6%) cases.

Conclusion: Recurrent abdominal pain, with or without abdominal distention or vomiting, is one of the main indicators for IH. Early intervention, even with negative imaging for this disease led to rapid and simple procedures without major complications.

OP.793

TREATMENT OF STENOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Laparoscopic sleeve gastrectomy (LSG) has become a frequent option for the treatment of patients with morbid obesity. After this procedure there are described complications such as bleeding, leaks and stenosis. The cause for gastric stenosis may be functional or organic. Most often the treatment can be done endoscopically with dilation, but for some selected cases surgery is necessary: laparoscopic seromyotomy or gastric bypass (LRYGBP).

We present the cases who developed stenosis after laparoscopic sleeve gastrectomy, their possible causes as well to present the available treatment solutions (endoscopically or laparoscopically).

Methods: We present our experience from the last 2 years, which consists of 816 sleeve gastrectomies. Of the total number of patients 583 were women and 233 were men. Thirteen (1, 59%) of them (all women) have developed postoperative symptomatic stenosis. The time between the surgery and the appearance of symptoms was between 1 day to 5 months. Location of stenosis was as follows: proximal third in the case of 4 patients (2 after gastric tube migration and 2 after fistula); middle third (incisura angularis) in the case of 9 patients (modification of the gastric tube geometry). The approach in permanent stenosis depends on its type. In case of severe

stenosis - 3 patients with high grade dysphagia, laparoscopic surgery was the first option (laparoscopic repositioning of the gastric tube after intramediastinal migration and after twisting due to inadequate over sewing). For partial stenosis (10 patients) the first treatment option was endoscopic dilations.

Results: In the 3 patients laparoscopically reoperated the postoperative outcome was favorable with rapid tolerance for liquids and disappearance of symptoms. Endoscopic balloon dilation (1 to 3 sessions) were performed for 10 patients with favorable evolution without further complaints/complications. Out of all the patients primary operated in our hospital, we had a case (operated in other institution) with persisting symptomatology after multiple sessions of endoscopic dilations. In such situation laparoscopic seromyotomy was performed, but with poor results that imposed laparoscopic conversion to Roux-en-Y gastric bypass. The radiological contrast study after 1 month was satisfied for all patients. Mean follow-up was 9 months.

Conclusions: Stenosis after laparoscopic sleeve gastrectomy are rare, but still we can reduce the incidence by a proper surgical technique continuously improved. Early diagnosis and treatment generates good results (endoscopically and surgically). Endoscopic dilatation is efficient, but in some cases it might require multiple sessions. Laparoscopic seromyotomy is technically feasible, not easy, but only in selected cases (good gastric motility and clearance). The best possible operation is probably conversion to Roux-en-Y gastric bypass.

OP.800

JEJUNOILEAL BYPASS AS A SECOND STEP TO IMPROVE OUTCOME OF SLEEVE GASTRECTOMY

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Introduction: Currently the major challenge for the bariatric surgeon is what to do with those patients who did not have the expected weight loss after bariatric surgery or who had regained weight some years after this procedure.

Sleeve gastrectomy (SG) is a restrictive technic for surgical treatment of morbid obesity. The procedure linked to the elimination of ghrelin-producing area, according to the resection of gastric fundus, and restriction due to the removal of approximately 70% of the stomach. Intending to maximize the effects of the SG, not only in inducing weight loss after surgery, but enhance the maintenance of lean weight in the long term, and add a metabolic component, we proposed the association of jejunioleal bypass to SG. The procedure of Jejunioleal baypass with the SG in the same time is already being done in the last 8 years, with good results.

The aim of this study is to report the results of the Jejunioleal bypass as a second step, in cases that SG was insufficient to achieve the necessary weight loss and treatment of comorbidities.

Method: Four patients were operated by laparoscopy, with a latero-lateral jejunioleal bypass performing the anastomosis between the jejunum at 80 cm from Treitz angle and the ileum at 120 cm from ileocecal valve, as a second step 7 - 46 months after the SG.

Results: The 4 patients consisted of 3 women and 1 men, aged between 31 and 60 years, with an average BMI of 35,25, and 41,08 of average initial BMI (before SG), with a mean follow-up of 2- 5 months. There were no postoperative complications. The average loss of excess weight was 22% during this period.

Two of the patients had comorbidities such as hypertension and diabetes and all of them stopped using the medications to control comorbidities before 2 months after operation

Conclusion: We can conclude that Jejunioleal bypass after SG is a safe and very simple procedure, adding probably a metabolic effect to a restrictive procedure, improving the results and achieving proper weight loss and treatment of comorbidities.

OP.805

TIMING OF CHOLECYSTECTOMY IN BARIATRIC SURGERY IS MATTER OF DEBATE.

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Introduction: Rapid weight loss due to very low calorie diet or bariatric surgery exposes patients to a higher incidence of gallstones, symptomatic or not. There are few good quality studies analyzing the rate and the morbidity of concomitant versus subsequent cholecystectomy in the setting of Roux-en-Y gastric bypass (RYGBP). Prophylactic concomitant cholecystectomy during RYGBP and use of prophylactic ursodesoxycolic acid (UDCA) remain controversial.

Methods: 161 patients who underwent RYGBP without concomitant or previous cholecystectomy from 1999 to 2014 in our center of bariatric surgery were divided into 2 groups. In the first group, patients received prophylactic UDCA for 6 months, whereas patients in the second group received no medication. The rate of subsequent cholecystectomy was compared between groups, and potential risk factors such as age, BMI, Hypercholesterolemia, were analyzed.

Results: Of 1526 patients, 1302 (85,3%) underwent concomitant cholecystectomy and 60 (3.9%) patients had had previous cholecystectomy, leaving 164 patients at risk. A total of 15 (9,2 %) of them required subsequent cholecystectomy. There is no significant difference in the frequency of cholecystectomy between patients who received UCDA and those who did not (6.6% versus 8.9%, respectively, $P=0.77$). Median age of patients who submitted subsequent cholecystectomy was 44 years ($P=0.064$) with median value of BMI 48.3 kg/m² versus 40 years with median value of BMI 45.5 kg/m² ($P=0.016$). Hypercholesterolemia is predisposing factor for pathology of gallbladder in patients after obesity surgery (86.7% in the first group versus 69.8% in the second one, respectively, $P=0.17$)

Conclusions: There is no clear consensus on the optimal time of cholecystectomy in patients undergoing bariatric surgery. There are 3 possibilities of management: prophylactic concomitant cholecystectomy, a selective approach with cholecystectomy performed only in the presence of gallstones and/or biliary symptoms, and a wait and see approach with prophylactic UCDA. We highlight the importance of more studies regarding this problem, and propose a multi-centric randomized trial with objectives to examine the timing of cholecystectomy in bariatric surgery, analyze cholecystectomy/gallstone-related complication rate, identify predisposing factors for the development of gallstones after RYGBP, and evaluate the results of UCDA prophylaxis.

OP.808

PHYSICAL DISABILITY IN NEUROLOGICAL DISEASES – ARE THEY A REASON TO OMIT BARIATRIC SURGERY?

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Background: Physical activity is advocated to be an essential for sufficient weight loss after bariatric surgery. Physical disability due to a neurological disease is an obstacle to perform this component of the postoperative program. Is it nevertheless worth to operate on these patients?

Methods: In our database of prospectively collected data of all patients we identified 21 patients fulfilling the above mentioned criteria. There were 12 cases of multiple sclerosis, 4 patients with paresis of the legs and a variety of single diagnoses. Patients received RYGB or SG.

Results: Weight loss was achieved in all patients within the range which could be expected. Mobility improved in all patients due to weight loss although patients were unable to enforce sports to more than their usual physiotherapy. Four patients fixed to a rolling chair before surgery could abandon this device for short distances. Follow-up of 14 patients is available for three years or more.

Conclusion: Physical disability due to neurological diseases in combination with obesity is no contraindication for bariatric surgery. Although physical activity can hardly be enforced post operation mobility of the patients improve by weight loss.

OP.817

SURGICAL TREATMENT OF GASTRO-GASTRIC FISTULA AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOR MORBID OBESITY

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Background: Gastro-gastric fistula (GGF) is a reported complication after laparoscopic Roux-en-Y gastric bypass (LRYGB). The main symptoms are epigastric pain, nausea, vomiting and weight regain. There are no specific recommendations for surgical treatment of GGF.

Methods: single case experience of surgical treatment of GGF with laparoscopic surgical revision.

Results: from 2010 we treated two patients for symptomatic GGF after LRYGB, both required a surgical treatment. One patient with GGF was treated with laparoscopic resection of the fistula and performing a new gastrojejunal anastomosis (GJA) without resection of the remnant stomach (RS), the other underwent open technique.

Conclusion: laparoscopic treatment of GGF with resection of the fistula tract and performing a new GJA can be an effective management in symptomatic patients.

OP.820

SLEEVE GASTRECTOMY THE WORST CENARIO SHARJAH EXPERIENCE (UAE)

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Obesity is major public health problem worldwide with increase prevalence. And sleeve gastrectomy is one of the treatment option, but it is associated with complication like any other surgical procedure , and leak is the worst complication post sleeve gastrectomy , with leak rate incidence of 2-4 %.

Most of the leaks are difficult to interpret. Clinical signs are often silent and sometimes the only alarm sign of a possible complication is low grade fever or tachycardia.

Management of post operative leak is very challenging and it is better to prevent a leak than to be expert in managing leaks.

But what is the main cause of leak? We think that the cause is multi-factorial, where surgeon , device , and tissue could play a role , and in some cases the cause will remain unknown .

Each center can establish its own logarithm of treatment, but key success for any treatment is early detection , sepsis control , and good nutritional support .

In this presentation we are going to present four videos of leak cases out of 8 cases of leaks in more than 800 cases of sleeve gastrectomy in our center and each case had different presentation with different treatment and outcome. In four out of eight cases of leak the leak was associated with post operative bleeding , which made us to be more conscious regarding the possibility of leak and post operative bleeding.

OP.825

THE N-SLEEVE PROCEDURE (SLEEVE WITH ANTI-REFLUX VALV): IS IT AN OPTION TO DECREASE THE POST-OPERATIVE MORBIDITY OF SLEEVE GASTRECTOMY?

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Introduction: Sleeve gastrectomy was the most performed bariatric surgery in France in 2013 (24500 operations). Our team has developed a technique involving the creation of a Nissen antireflux valve associated with vertical gastrectomy to reduce postoperative reflux and decrease the rate of leak at the upper part of the stomach.

Methods: From November 2013 to March 2014, the NSleeve technique has been proposed to patients with preoperative hiatal hernia and GERD. These patients had been validated for bariatric surgery after multidisciplinary evaluation. The exclusion criteria were a BMI > 50 kg/m² or previous gastric banding. 25 patients were included (13 women and 12 men) with mean BMI 41 kg/m²(35-47) and mean age of 37 years.

Results: There was no conversion, no intraoperative complications nor mortality. Mean hospitalization was 4,7 days (3-7). During this period, one patient had to be reoperated to manage bleeding from staple line. There was no early fistula or bleeding. However, one patient had a perforation at the gastric valve at D7 that required readmission for surgical drainage. Clinical analysis at 1 year found remission of GERD symptoms in 23 patients (92%) as well as PPI stoppage. Mean excess weight lost at 1 year was 58.2 % (22-78). One patient had a troublesome dysphagia that was managed by extended period of mixed diet.

Conclusion: NSleeve technique seems to reduce post-operative complications while maintaining weight loss at 1 year follow-up. A long-term analysis is needed, but early results are promising.

OP.833

LAPAROSCOPIC MINI-GASTRIC BYPASS (MGB) TO SLEEVE GASTRECTOMY (SG), A SIMPLIFIED TECHNIQUE

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Background: Revision of any bariatric procedure is known to be challenging. MGB is recently being performed more frequently, however there are very few techniques described for its revision. This video demonstrates our simplified technique of Laparoscopic MGB to SG.

Methods: A 45 years old lady with T2DM, BMI 45 kg/ sq.mt, underwent MGB 3 years ago at an outside centre, was referred to us with severe anaemia in addition to malnutrition. She had to be transfused with blood and albumin 3 times and had protein malnutrition. She had undergone shortening of the bilio- pancreatic limb with Jejuno-Jenostomy, to reduce malabsorption, 1 year ago but symptoms persisted. With her BMI at 23, she wished to have a procedure with no malabsorption; hence she chose to have SG as a revision, instead of reversal.

Results: She recovered well with better nutritional status than before as well as maintained her weight, 1 year after revision.

Conclusion: MGB can induce severe malabsorption. MGB to SG can be a feasible option for revision in such situations.

OP.838**LAPAROSCOPIC MINI-GASTRIC BYPASS AS CONVERSION PROCEDURE OF FAILED GASTRIC BANDING**

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Background: Despite it is still offered to many patients worldwide, increasing experience with laparoscopic adjustable gastric banding (LAGB) has demonstrated a high rate of complications and inadequate weight loss. According to several authors laparoscopic Roux-en-Y gastric bypass (LRYGB) provides good early results and seems the revisional procedure of choice. The debate mainly concerns the one-stage or the two-stages approach for conversion, because of the risk of complications. Mini-gastric bypass (MGBP) or single anastomosis gastric bypass, allows creating an anastomosis in a healthy tissue, avoiding adhesions and scar tissue caused by the banding. On the other hand, the conversion of a failed restrictive procedure may needs a more malabsorptive revisional procedure, as MGBP is. In this video we describe two cases of laparoscopic MGBP as revisional procedure of failed LAGB.

Methods: In the first case is described a one-stage conversion to laparoscopic MGBP and in the second case a two-stages conversion. The procedure was similar to primary laparoscopic MGBP. We used a five ports technique. A side to side gastro-jejunal anastomosis was performed between the posterior aspect of the gastric pouch and the jejunal loop 200 cm from the Treiz's ligament.

Results: The postoperative course was uneventful. Both patients were discharged in second postoperative day after performing a contrast X-rays.

Conclusions: Conversion of failed LAGB to laparoscopic MGBP is safe and effective, both as one-stage or two-stages procedure. Despite larger series and longer follow up are necessary, laparoscopic MGBP seems an appealing and promising conversion procedure of failed LAGB.

OP.841**BLEEDING AFTER SLEEVE GASTRECTOMY: CAN IT BE PREVENTED?**

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Background: Sleeve gastrectomy is being performed increasingly, mainly due its low morbidity and mortality. The aim of this study was to evaluate the bleeding rate of sleeve gastrectomy as a primary bariatric procedure.

Methods: Medical charts of all patients who underwent a primary sleeve gastrectomy between August 2008 and December 2014 with staple line reinforcement by suturing were reviewed retrospectively. A subgroup analysis for bleeding was done to compare patients after reduced port versus multiport technique and primary versus revisional sleeve gastrectomy.

Results: A total of 664 sleeve gastrectomies (489 women and 175 men) were performed in the study period. The mean age and body mass index were 42.9±8.3 kg/m² and 36.03±11.4 years respectively. The mean operative time was 58.5±20.0 minutes, with a 0.15% conversion rate. The median hospital stay was 2.1. Thirty-day complications rate was 8.7%. Postoperative bleeding was seen in 13 patients (2%). Only 3 patients required reoperation (0.5%). Staple-line leakage and the mortality rate was zero in this series. No difference in postoperative complications was found between the subgroups.

Conclusions: Sleeve gastrectomy is a safe and effective bariatric procedure with low complications rate. The majority of intra-abdominal bleeding can be managed conservatively. Reduced port technique and revisional sleeve gastrectomy has similar complication rates to primary sleeve gastrectomy.

OP.848**MINI GASTRIC BY-PASS COMBINED WITH SUBTOTAL GASTRECTOMY FOR THE MANAGEMENT OF MORBID OBESE PATIENT WITH GASTRIC LESION.**

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Introduction: Incidental gastric lesions are frequently presented in routine endoscopy during a preoperative work up for metabolic surgery

Aim: We present a case of GIST lesion diagnosed during routine work up for metabolic surgery

Case presentation: A 30 years old female patient with BMI=43 and no comorbidities was planned for laparoscopic gastric mini by pass. A submucosal lesion was diagnosed at the antrum during her endoscopy. A laparoscopic mini gastric by-pass along with removal of the remaining stomach was decided in order to manage both diseases.

Results: The patient has uneventful post-operative course with liquid diet starting at the 1st postoperative day and was discharged from the hospital at 4th post-operative day. The submucosal lesion was ectopic pancreatic tissue that was completely removed.

Conclusion: Incidental findings may occur during preoperative work-up for morbid obesity and constitute a challenge for the surgeon that should manage both diseases.

OP.850

GASTRIC SLEEVE SAVING ANTRUM; RESULTS OF 1000 CASES

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Introduction: Many ways to perform Laparoscopic Gastric Sleeve and different techniques are done. All of us we try to avoid the most serious complications as the leak and bleeding and to reserve a good mechanical and metabolic function.

Objectives: A new method was introduced reserving the antrum and part of the body of the stomach showing a good reservation of motility and secretion of the stomach.

Methods: Non Randomized study was done selecting cases for the new technique stapling at 6-8 cm far from the pylorus starting with green reload 60 mm and plicating that part to reserve function and reduce the size of the Sleeve. Another staplers Gold 60 mm were applied till the GE Junction and then reinforced by 2/0 prolyne running stitches.

Results: No leak occurred in all the cases done (more than 1000 cases). 2 cases of post op bleeding and 1% of vomiting and no PE .02 % of intra abdominal abscesses. No trocar site hernias. No Vitamin deficiencies in 95% of cases after 4 months without need to continue taking supplements.

Conclusions: The New method of sleeve saving Antrum is a good technique reducing surgical and metabolic complications.

OP.859

NOVEL METABOLIC SURGERY LDJB-SG IN TREATING II D.M; GLYCEMIC AND INCRETIN RESULTS

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Background: The goal of this study was prospectively to evaluate the short-term results of loop duodenojejunal bypass with sleeve gastrectomy (LDJB-SG) on glycemic control, pancreatic function and incretin hormones in type 2 diabetic patients.

Methods: A total of twenty seven patients (5 males and 22 females) with type 2 diabetes (mean duration: 10.19 ± 5.66 years) underwent LDJB-SG surgery were enrolled from May 2013 to March 2014. Mean preoperative body mass index (BMI) was 28.38 ± 4.3 kg/m² (18.26 - 34.23 kg/m²). Body weight change along with 2 hours oral glucose tolerance test (OGTT) measuring changes of glucose, C-peptide, insulin IRI, ghrelin, glucagon-like peptide-1 (GLP-1) and peptide YY (PYY) were recorded postoperatively.

Results: Average BMI was reduced to 25.21 ± 3.66, 23.47 ± 3.06, and 22.16 ± 2.75 Kg/m² at 1, 3, and 6 months postoperatively respectively ($p < 0.01$). Fasting Sugar and HbA1c (Glycated haemoglobin) was changed from 162mg/dL and 9.31 ± 1.8% preoperatively to 139mg/dL and 7.60 ± 1.3% at 1 month, 111mg/dL and 6.28 ± 1.1% in 6 month postoperative ($p < 0.01$). On glucose tolerance test, peak GLP-1 happened at at 30 minutes and was increased from 219.07 ± 176.94 ng/mL preoperatively to 510.34 ± 292.56 ng/mL at 1 month ($p < 0.01$) and 327.89 ± 188.83 ng/mL at 6 month ($p = 0.017$). Peak PYY was also noted at 30 minutes and changed from 162.85 ± 101.17 pmol/L/min preoperatively to 518.56 ± 134.13 pmol/L/min at 1 month ($p < 0.01$) and 164.90 ± 174.89 pmol/L/min at 6 month ($p = 0.96$) postoperatively. Postoperative fasting ghrelin was significantly lower than that of the preoperative level, 98.58 ± 71.09 pg/mL, 52.21 ± 29.07 pg/mL, 21.99 ± 11.27 pg/mL at preoperative, 1 month ($p < 0.01$) and 6 month ($p < 0.01$) respectively. C-peptide AUC in 2 hrs OGTT test was also significantly increased from 413.30 ± 198.03 ng/mL to 638.83 ± 526.42 ng/mL ($p < 0.01$) and 712.46 ± 438.71 ng/mL ($p < 0.01$) at 1 month and 6 months respectively.

Conclusions: In this 6 months study, LDJB-SG show a beneficial effect on weight loss, glucose metabolism, decreased ghrelin, and increased incretin effect in with BMI < 35 type 2 diabetes patients. Pancreatic beta cell secretion was also enhanced.

OP.861

EROSIVE ESOPHAGITIS AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDED PPLICATION AND LAPAROSCOPIC SLEEVE GASTRECTOMY: A CASE-MATCHED COMPARISON STUDY

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Background: Increased prevalence of erosive esophagitis (EE) has been reported after laparoscopic sleeve gastrectomy (LSG) in various previous studies. Laparoscopic adjustable gastric banded plication (LAGBP) results in post-operative shape of stomach and effective weight loss, but its effect on EE is still unknown. The aim of the study is to collect prospectively collected information for comparing the change EE after LAGBP with LSG.

Methods: We retrospectively reviewed patients in our center underwent LSG or LAGBP, who receiving esophagogastroduodenoscopy (EGD) both preoperatively and at a minimum of 12 months following surgery. Totally 130 patients (46M/84F) were enrolled and 65 patients in each group were matched with age, gender and body mass index (BMI).

Results: Mean age and BMI were 31.6 years old and 37.5 kg/m². 12 months after surgery, patients in both groups have significant improvement in BMI, waist circumference (WC) and metabolic syndrome but patients in LAGBP group had significantly higher post-operative BMI (28.0 vs. 25.5 kg/m²) and WC than those after LSG. Remission of Type II Diabetes or hyperglycemia was also decreased from 29.2% to 3.1 % in both groups ($P<0.001$). The prevalence of EE after surgery significantly increased in both groups, from 20% to 45.4% in LAGBP group ($P<0.001$); from 16.3% to 65.5% in LSG group ($P<0.001$), but significantly lower in LAGBP than LSG group ($P=0.035$).

Conclusions: In this one-year result, both LAGBP and LSG resulted in significant improvement in BMI and comorbidities but increased prevalence of EE. However, the prevalence of post-operative EE was significantly lower in patients undergoing LAGBP.

OP.873

LAPAROSCOPIC SLEEVE GASTRECTOMY: DESCRIPTION OF OUR TECHNIQUE

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Introduction: Bariatrics is a new field in the surgical department in full expansion. It is important to determine the surgical steps to improve the overall outcome. The aim of this presentation is to describe our technique.

Surgical technique: Patient is placed in a supine French position, 35° anti-Trendelenburg. Pneumoperitoneum of 14mmHg is accomplished and the insertion of the trocars (5mmX2, 10mm and 12mm) follows. A longitudinal resection of the stomach is performed on the greater curvature from antrum, just 1,5cm above pylorus, up to the His angle, including the gastric fundus, but preserving the right gastroepiploic artery and the His angle. Stomach is reduced to a narrow tube using a linear stapler (Echelon®). A rhinogastric tube (34Fr) is used. Application of hemostatic glue along the staple line and placement of a latex drain follows.

Follow-up: Patients remain hospitalized and NPO for 4 days, receiving IV fluids and analgesia. Blood examination and drain count for amylase is performed on day 2 and 4. On day 4 liquid diet is initiated. Patients are discharged with a strict dietary schedule for a month and reexamined at 1 week, 1, 3, 6 and 12 months.

Aims: The initial goal is a weight loss of 3kg per month, achieving ideal BMI by third year. The aim of this surgical procedure is to improve quality of life and reduce as much excess body weight as possible, as long as it has no side effects, such as nutritional deficiencies or vomiting.

OP.877

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) AFTER FAILED GASTRIC BYPASS: IS THE ADDITIONAL WEIGHT LOSS WORTH THE RISKS?

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Introduction: Gastric bypass (GBP) is associated with 15% weight loss failure, resulting in insufficient weight loss or weight regain. Strategy of surgical revision focuses on alteration of limb length, pouch size or stoma size. Altering pouch size by adding LAGB might initiate further weight loss.

Objectives: Review the safety and efficacy of LAGB after failed GBP.

Methods: Patients with LAGB (n=44) after failed GBP were studied between May 2012 and January 2015. Demographics, effects on weight loss and complications were analysed.

Results: Mean age and body mass index (BMI) at time of LAGB was 45,8±8,2 years and 37,2±5,4 kg/m² respectively. The mean interval between GBP and LAGB was 2,6y±1,3y. Mean follow-up was 13±7,9 months. Due to LAGB, patients lost an additional excess weight of average 12,7%±20,3% and mean BMI was 36,3±6,3 kg/m² at 12 months. Combining GBP and LAGB resulted in 34,6%±27,2% excess weight loss at 12 months follow-up. Reoperations were performed for port flip (n=1) or band removal (n=6). Reasons for removal included band migration (n=2), persistent dysphagia despite complete desufflation (n=3) and postoperative chronic abdominal pain (n=1). One technical failure, band leakage, occurred and one fatality due to septic shock following band erosion was observed.

Conclusion: These results indicate that adding LAGB after failed GBP only slightly increases weight loss, but leads to significant complications.

OP.890

THE TREASURE IN TREATING TYPE 2 DIABETES IN HUMANS LIES NEITHER IN THE DUODENUM NOR IN THE ILEUM BUT RATHER IN THE STOMACH

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Introduction: Animal studies have suggested two main theories to explain remission of diabetes soon after bariatric surgery unrelated to the weight loss; the foregut and hindgut theories. Subsequently, several procedures were initiated as a direct utilisation of the two theories initially in animals and then in humans.

Objectives: The aim of this study is to systematically identify and then review these procedures.

Methods: A systematic literature search was performed to identify the relevant procedures and then to systematically review them. The primary outcome was remission rates of diabetes.

Results: Four procedures utilised the foregut and hindgut theories and used in humans. These were duodenojejunal bypass with sleeve gastrectomy (DJB-SG) and without sleeve gastrectomy (DJB), ileal interposition with sleeve gastrectomy (IL-SG) and endoscopic duodenojejunal bypass sleeves (DJBS). A total of 24 papers that studied these four procedures were found. Of which there were a total of 921 patients with T2DM. The remission rates, using the studies own definitions of remissions were 16-100% after DJB, 73-91% after DJB-SG, 62.5-100% after DJBS and 47-95.7% after IL-SG. Studies that used acceptable definitions of remission (HbA1c level and no diabetes medications) showed remission rates between 20-95.7%.

Conclusions: Remission rates of type 2 diabetes in humans after foregut- and hindgut-based procedures are similar to the remission rates seen after sleeve gastrectomy. This non-superiority questions the usefulness of complex procedures which achieve similar outcomes to a simpler procedure, and also casts doubt on the applicability of the foregut and hindgut theories in humans.

OP.894

TREATMENT FOR ASIAN OBESE ADOLESCENTS: LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS OR SLEEVE GASTRECTOMY?

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Background: The prevalence and severity of obesity in adolescents has been increasing in recent years at an unprecedented rate. Data in the Asian adolescent population are sparse. The aim of this study was to assess the safety and efficacy of laparoscopic Roux-en-Y gastric bypass (LRYGB) and sleeve gastrectomy (LSG) as new treatment modalities for morbidly obese adolescents.

Methods: Clinical and follow-up data of all adolescent patients who underwent LRYGB and LSG in the First Affiliated Hospital of Jinan University between 2010 and 2014 were analyzed retrospectively.

Results: All cases were successful without conversion to open surgery or death. Twenty five patients were available for follow-up at least one year (range 1-5 years) after operation. The patients had average age of 16.4 years (range 12–18), mean body mass index of 38.5 kg/m². The %EWL at 1 year for LRYGB and LSG was 88% and 76 %, respectively. All of the patients with type 2 diabetes mellitus and 75 % of those with hypertension showed complete resolution of the disease at 1 year. No severe complication was observed before and after surgery.

Conclusions: The long-term follow-up and perioperative morbidity shown in this study suggest that LRYGB and LSG appear to be safe and effective operations in morbidly obese adolescents.

OP.898

ROBOTIC SADI FOR REVISION AFTER PREVIOUS SLEEVE GASTRECTOMY

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Background: Robotic Bariatric Surgery is a good option for revision bariatric surgery. After a failed sleeve gastrectomy or following weight regain, a malabsorptive procedure is considered by many to be a better option than a gastric bypass. Single anastomosis duodeno-ileal bypass (SADI) is one of the various choices that are available.

Methods: We have done 8 robotic SADI gastric bypass surgeries. The robot is docked above the head of the patient in the midline. Camera port is placed supra umbilically. Two ports are placed on the left side of the patient and one port on the right side of the patient. An assistant port is placed between the camera port and right sided robotic port for use of stapler. Adhesiolysis is done near the distal stomach and duodenum. Duodenum is dissected free till the second part and transected. Ileal loop is measured from ileocecal junction backwards for 250 cm and a side to side sutured duodeno ileal anastomosis done.

Results: All patients had a successful robotic procedure. Mean time taken was 110 minutes. There were no intraoperative or post operative complications.

Conclusions: A robotic revisional single anastomosis duodeno ileal bypass surgery fully utilizes the potential of robotic bariatric surgery.

OP.916

FROM LAPAROSCOPIC TO ROBOTIC SLEEVE GASTRECTOMY: A TRANSITION TO AN EASIER AND SAFER APPROACH

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Background: There are only few reports on the application of robotics for sleeve gastrectomy, which potentially facilitates the procedure due to enhanced visualization and high dexterity of the instruments. We present our experience as well as our technique in this paper.

Methods: After 515 LAGBs since May 1996, our team slowly adopted sleeve gastrectomy as an efficient bariatric procedure. From February 2009 till February 2015, 35 sleeve gastrectomies have been performed. 22 of them were performed using the da Vinci robotic system. The robotic approach was initially offered in the case of anticipated technical difficulties with superobese patients, but gradually was established as our standardized approach. The procedure is performed routinely by using air-seal trocar for controlling the pneumoperitoneum while division of the short gastrics takes place with the robotic vessel sealer coagulation device. We routinely reinforce the staple line with continuous 3-0 V-lock suture and glue. A Jackson Pratt drain is always left near the staple line. All patients undergo a gastrographin swallow on postoperative day 2 and are discharged on the same day. Routine follow up is on the first week, first month and then every three months.

Results: There were no intraoperative complications and the robot facilitated the procedure at all times. Retraction issues of the large left liver lobe were much easier to handle by use of the fourth arm. Postoperatively, there were no leaks from the staple line in all 30 patients. 17 patients from the robotic group reported a less painful postoperative course probably due to the lower pneumoperitoneum pressures required. Unfortunately one patient died on PO day 3 in the ICU after an episode of massive pulmonary embolism.

Conclusions: Robotic Sleeve Gastrectomy is a promising approach for an already efficient operation. Strengthening of the staple line takes place much more efficiently thanks to the robotic needle drivers and the superior quality of visual field. Finally, the robot seems to offer a shorter learning curve for younger laparoscopic surgeons.

OP.926

LAPAROSCOPIC REDUCED-PORT ROUX-EN-Y GASTRIC BYPASS AND CHOLECYSTECTOMY

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Introduction: We present a case of a 42 year-old female with long history of obesity with current BMI of 48kg/m², with multiple comorbidities, particularly symptomatic biliary lithiasis, high blood pressure and GERD. Preoperative work-up showed chronic gastritis without HP infection. After multidisciplinary work-up, we decided to perform Roux-en-Y gastric bypass (RYGB) combined with cholecystectomy with a reduced-port approach.

Objectives: To show the technical aspects of a reduced-port RYGB and to discuss our current experience on this approach.

Methods: The patient was placed in the French position. A blunt technique was used for pneumoperitoneum with two 5-mm and one 12-mm trocars with a 5-mm 30° scope. We performed a RYGB with mechanical anastomosis: antecolic/linear gastro-jejunal and linear jejuno-jejunal anastomosis with a 150-cm alimentary limb and a 50-cm biliopancreatic limb. All mesenteric defects were closed with non-resorbable sutures. Cholecystectomy was performed as usual.

Results: Operative time was 75 min. No blood loss. Early deambulation within the next 6 hours following the end of the procedure. DVT/PE prophylaxis was obtained with LMWH and SCD boots. Postoperative period eventful. Discharge at postop day 2. We have performed 35 reduced-port RYGB successfully with no morbidity nor mortality with a mean operative time of 92 min (46 - 120).

Conclusions: Reduced-port RYGB is safe and feasible with reduced pain and fast recovery as with a single-incision approach but with less operative time.

OP.929

LAPAROSCOPIC SLEEVE GASTRECTOMY AS REVISIONAL SURGERY FOR FAILED POSE PROCEDURE

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Introduction: Some surgeons are practicing the POSE (Primary Obesity Surgery Endoluminal), consisting on an endoscopic technique based on performing and suturing gastric folds in fundus and antrum, aimed to induce earlier fullness and prolonged satiety.

Objectives: To the best of our knowledge, laparoscopic sleeve gastrectomy after failed POSE procedure has not been previously reported.

Methods: The patient is a 64-year-old morbidly obese man with BMI of 42 kg/m², out of a series of 6 patients who underwent POSE at our Hospital in 2011. At that time he was unwilling to undergo a surgical procedure. Eight anchors were endoscopically placed using the Trans Port Endoscopic Access Device (USGI Medical) in order to plicate the gastric fundus and 3 more were placed in the antrum. POSE went smoothly without complications. At a 3-months follow-up his %EWL was 9% and remained stable in the next months. Two years later in view of his poor quality of life associated with failure of his POSE with weight gain, both the patient and his general practitioner asked for a revision and he was offered surgery with a secondary bariatric procedure. He subsequently underwent a laparoscopic sleeve gastrectomy calibrated on a 34-F bougie with multiple firing of green staples cartridges without buttressing material.

Results: Some adhesions were found in the fundal region near the diaphragm. There were no postoperative complications. The patient is now doing well with a 28,46%EWL at 6 months follow-up with a BMI of 37,22 kg/m².

Conclusions: Laparoscopic sleeve gastrectomy proved to be feasible and safe after POSE.

OP.933

DUODENO-ILEAL ANASTOMOSIS HAND-SEWN, SIMPLIFIED BY BARBED SUTURE.

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We present a video of 7 minutes long, where we show the use of barbed suture type, for performing a duodeno-ileal anastomosis, simplifying their ejection.

The suture is made in the following order:

- 1- First backside with barbed suture polyglycolic 3/0 of 12 cm, by continuous suture.
- 2- Second backside with barbed suture polyglycolic 3/0 of 23 cm, and which binds to First anterior layer, by continuous suture.
- 3- Second anterior, reinforcing suture 3/0 polyglycolic by continuous suture.

The barbed suture gives us:

- Prevents the loose of suture tension, if you reduce tension; it get maintain constant tension.
- Provides technical stability and security during execution.
- Facilitates the start and end points; can be dispensed with the classic knots.

- Facilitates careful closure of the corners of the suture
- Ease and simplicity in execution
- The need for assistance is lower.

Disadvantage of barbed suture:

- The thread can be damaging to the fabric by passing beads.
- It requires careful handling in traction; excessive tensile not have "reverse" and could cause tissue ischemia.
- In case of error, the thread must be cut in the beginning of the continuous suture and remove everything.
- In our opinion, only be used when you already have experience in hand-sewn anastomosis with conventional yarns.

OP.940

ENDOSCOPIC STENT PLACEMENT AS THERAPEUTIC OPTION FOR POST BARIATRIC SURGERY LEAKS: THE KUWAIT EXPERIENCE.

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Background: Gastric leak following bariatric surgery is one of the most serious complications. Endoluminal stenting is associated with less morbidity than revisional surgery.

Methods: A total of 115 patients presented with post sleeve gastrectomy (SG) leaks (98%) and RYGB were treated with metal stent (SEPCMS) to seal the leaks. The median age was 38 years (range 17-58) and 89% of the patients were female. Gastric leak was confirmed by fluoroscopy and/or CT-abdomen with oral contrast. The SEPCMS was placed and kept for 6-8 weeks. Oral feeding was started 5-7 days if there was no evidence leak as confirmed by Gastrografine study. Fully covered plastic (Polyflex) stent was inserted at six weeks inside the SEPCMS to decrease granulation tissue for removal.

Results: All procedures were performed successfully. Both stent were removed successfully in all patients at week 12. One patient had esophageal mucosal tear that was treated endoscopically and two patients had esophageal stricture. Leaks were treated in 82% of our cases.

Conclusions: Enoluminal stenting for the treatment of early and late post bariatric surgery leak is a viable and safe therapeutic option in selected patients.

POSTER PRESENTATIONS

P.004 PREVALENCE OF OBSTRUCTIVE SLEEP APNEA AND POLYCYSTIC OVARY SYNDROME OF OBESITY PATIENTS WHO UNDERWENT GASTRIC BYPASS SURGERY

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Introduction: Obesity patients are highly related OSA and PCOS compared to non-obese patients. To find out prevalence of OSA and PCOS, we perform retrospective study who underwent gastric bypass surgery for obesity in single center.

Methods: In a single center, 101 patients who underwent gastric R-en-Y bypass surgery by single surgeon, between the ages of 21 and 60 years were reviewed. Polysomnography, for diagnosis of OSA, abdominal ultrasonography and hormonal study for diagnosis of PCOS were done by preoperative evaluation. The prevalence of OSA and PCOS were reviewed from below criteria; (AHI >30 in OSA, total testosterone level > 1.0ng/dL in PCOS)

Results: The prevalence of OSA, which over 30 scores in AHI, 39 patients were include. And prevalence of PCOS was 9 patients from 31 patients who underwent pre-operative hormonal study.

Conclusion: In obesity patients, there is highly related with OSA and PCOS, the prevalence of OSA and PCOS are reviewed retrospectively. Due to selection of patients only who underwent gastric bypass surgery, selection bias was limitation in our study. Further research and more evaluation will be needed.

P.010 LAPAROSCOPIC SLEEVE GASTRECTOMY FOR TYPE 2 DIABETES MELLITUS: PREDICTING THE SUCCESS BY ABCD SCORE

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Background: Laparoscopic sleeve gastrectomy (LSG) is becoming a primary bariatric surgery for obesity and related diseases. This study presents the outcome of LSG with regard to the remission of type 2 diabetes mellitus (T2DM) and the usefulness of a grading system to categorize and predict outcome of T2DM remission.

Methods: A total of 157 patients with T2DM and morbid obesity (mean body mass index [BMI] 39.0 + 7.4 Kg/m²) who under gone LSG from 2006 to 2013 were selected for present study. The ABCD score is composed of the age, BMI, C-peptide levels and duration of T2DM (years). The remission of T2DM after LSG was evaluated using the ABCD score.

Results: At 12 months after surgery, 85 of the patients had follow-up data. The weight loss was 26.5% and the mean HbA1c decreased from 8.1 to 6.1%. A significant number of patients had improvement in their glycemic control, including 45(52.9%) patients had complete remission (HbA1c < 6.0%), 63(74.1%) partial remission (HbA1c < 6.5%) and 72(84.7%) improved (HbA1c < 7%). Patients with their T2DM remission after surgery had a higher ABCD Score than those without (7.3+ 1.7 vs. 5.2 + 2.1, p< 0.05). Patients with higher ABCD Score were also at higher rate of success in T2DM remission (from 0% in score 0 to 100% in score 10).

Conclusion: LSG is an effective and safe procedure for achieving weight loss and T2DM remission. The ABCD Score, a simple multidimensional grading system can predict the success of T2DM treatment by LSG.

P.013 MOTIVATIONAL INTERVIEWING TECHNIQUES FOR PROFESSIONALS AND PATIENTS: IMPROVING PATIENT SELF-TALK, SELF-EFFICACY AND SELF-ESTEEM.

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Motivational interviewing is a therapeutic approach shown to assist in improved long-term outcomes for a variety of health issues. Four guiding principles form the basis of Motivational Interviewing: empathy and acceptance, helping people to make up their minds on how to move forward, developing a new understanding of self, and support.

Motivational Interviewing is used in the field of weight loss to help people develop and recognize their capabilities for behavior change. Practitioners and patients can use motivational interviewing to increase patient motivation to change. By developing the belief that they can perform a specific behavior or complete a specific task, patients see that change is possible. Patients are ultimately responsible for choosing to change and for carrying out change, and are shown options as to how to go about making their desired changes. Through the use of motivational interviewing the modeling by professionals, patients can then use these tools with one another and self to increase self-efficacy and self-esteem while following through with behaviors that are in alignment with their personal goals.

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P.014
ACCEPTANCE AND COMMITMENT THERAPY: ACT TO IMPROVE LONG-TERM OUTCOMES IN THE BARIATRIC POPULATION.

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Acceptance and Commitment therapy (ACT) is a cognitive behavioral approach that is used to treat numerous health issues, including obesity. ACT uses the concepts of acceptance and mindfulness as well as commitment and behavior change to help people emotionally distance, or “defuse” from difficult thoughts and to accept difficult feelings while continuing to work toward behaving in ways that are consistent with their personal values.¹

Several studies using the ACT approach have proven helpful with weight-related issues. “...this is the first study to specifically target emotional overeaters, a subgroup that might be particularly responsive to this new approach. Our findings provide initial support for the feasibility, efficacy, and acceptability of this approach for this subgroup of participants.”² “This study shows that it is possible to improve effects of bariatric surgery by specifically targeting emotional eating behavior.”³

Practitioners in the multidisciplinary team can use ACT techniques with bariatric patients throughout their weight loss journey to assist them in behaving in a values-consistent manner while learning to defuse from thoughts that have traditionally entrapped them.

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P.019
REMISSION OF TYPE 2 DIABETES AFTER OMEGA LOOP GASTRIC BYPASS FOR MORBID OBESITY

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Introduction: Roux-en-Y gastric bypass (RYGBP) is a validated technique for the treatment of morbid obesity and results in a significant rate of remission of type 2 diabetes (T2D). Omega gastric bypass (OGBP) is an effective and simpler alternative for weight loss, but its effect on T2D is unclear.

Methods: Between December 2006 and September 2012, 804 laparoscopic OGBPs were carried out in our centre. Among these, 100 (12.4%) patients had T2D at the time of the intervention. Remission of T2D was defined by a glycated haemoglobin (HbA1c) level of <6% without concomitant treatment.

Results: Post-operative follow-up was completed by 81 patients (mean age: 49 ± 11 years; mean weight at surgery: 133 ± 29 kg; mean body mass index (BMI): 47 ± 9 kg/m²). Mean preoperative HbA1c was 8 ± 2 g/dl. Before OGBP, seven patients (9%) had received no oral hypoglycaemic treatment, 30 (37%) had received monotherapy, 26 (32%) bithery, six (7%) tritherapy, and 12 (15%) patients had used insulin. Over a mean follow-up of 26 months (range: 1-75), mean weight decreased to 94 ± 23 kg and mean BMI to 35 kg/m². Seventy-one (88%) patients had complete remission of T2D and the other 10 (12%) had reduced their treatment. Seven patients (58%) initially treated with insulin no longer required this treatment. Mean time to remission of T2D for patients receiving one or more oral therapies vs. insulin was 6.9 vs.17.9 months.

Conclusions: OMBP is effective treatment for obesity in terms of weight loss and remission of T2D.

P.027
COMPARISON OF ESTIMATED WEIGHT LOOSE IN SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BY-PASS

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Background: Estimated weight loose (EWL) is an important parameter in bariatric surgery indicating the postoperative success in weight loss. We aimed to compare the EWL in sleeve gastrectomy and roux-en-y gastric by-pass.

Methods: During a one-year period (2013) data of patients who underwent bariatric surgery in our clinic were recorded prospectively including demographical data, operation type, preoperative Body Mass Index (BMI) and postoperative 1st-3rd-6th and 12th month BMI. The patients were analyzed in two groups; GroupS(n=30): patients who underwent sleeve gastrectomy and GroupR(n=30): patients who underwent Roux-En-Y Gastric By-Pass.

Results: There was no statistically significant difference regarding the patients' demographics and perioperative complication rates. Body Mass Index(BMI) was 51,3+/-8,5 in GroupS and 56,1+/-7,3 (p=0.024).

		GroupS (n=30)			GroupR (n=30)			p		
		Mean±SD	Med(Min-Max)			Mean±SD.	Med(Min-Max)			
EWL (%)	1st month	23,8 ± 7,0	23	12	- 42	31,6 ± 6,9	31	17	- 50	0,000
	3rd month	45,7 ± 10,4	45	27	- 66	60,0 ± 7,8	59	42	- 73	0,000
	6th month	68,1 ± 10,8	70	47	- 93	80,9 ± 4,9	81	69	- 91	0,000
	12th month	80,9 ± 7,7	82	62	- 98	89,2 ± 3,7	90	79	- 97	0,000
1st-3rd change	month	21,9 ± 8,0*	20	9	- 43	28,4 ± 7,2*	28	10	- 43	0,001
1st-6th change	month	22,4 ± 5,7*	22	9	- 34	20,8 ± 8,5*	20	6	- 40	0,398
1st-12th change	month	12,8 ± 7,2*	13	0	- 32	8,4 ± 2,6*	7	4	- 15	0,003

t test / analysis of variance

*p < 0,05 is statistically meaningful within the group

Conclusions: Albeit Roux-En-Y Gastric By-Pass is a more invasive procedure compared to sleeve gastrectomy and has its own handicaps related to the operational procedure, this study indicated that Roux-En-Y Gastric By-Pass is more successful in EWL compared to sleeve gastrectomy. However, sleeve gastrectomy is a more simple procedure compared to Roux-En-Y Gastric By-Pass and with mean 80,9% EWL sleeve gastrectomy can be chosen alternatively to Roux-En-Y Gastric By-Pass, which has a 89,2% EWL.

P.029 TREATMENT OF COMORBID FACTORS TO MORBID OBESITY WITH SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BY-PASS

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Background: The relationship between type 2 diabetes mellitus, hypertension, hyperlipidemia, obstructive sleep apnea and obesity is well established, and surgical treatment is widely used besides medical therapy for definitive cure. The aim of this study was to compare treatment of comorbid factors to morbid obesity with sleeve gastrectomy and roux-en-y gastric by-pass.

Methods: During a one-year period (2013-2014) data of patients who underwent bariatric surgery in our clinic were recorded prospectively including demographical data, operation type, preoperative and postoperative 6th and 12th month HbA1C, hypertension, LDL, triglyceride, obstructive sleep apnea. The patients were analyzed in two groups; GroupS(n=30): patients who underwent sleeve gastrectomy and GroupR(n=30): patients who underwent Roux-En-Y Gastric By-Pass.

Results:

		Grup S (n=30)		Grup R (n=30)		p
		n	%	n	%	
DM	Preoperatif	20	66,7%	14	46,7%	0,118
	6.month	2	6,7%	3	10,0%	0,640
	12.month	0	0,0%	0	0,0%	-

	Preoperatif	17	56,7%	21	70,0%	0,284
HT	6.month	1	3,3%	0	0,0%	1,000
	12.month	1	3,3%	0	0,0%	1,000
TG	Preoperatif	6	20,0%	25	83,3%	0,000
	6.month	0	0,0%	0	0,0%	-
	12.month	0	0,0%	0	0,0%	-
LDL	Preoperatif	12	40,0%	26	86,7%	0,000
	6.month	0	0,0%	1	3,3%	1,000
	12.month	0	0,0%	0	0,0%	-
Obstructive sleep apnea	Preoperatif	4	13,3%	6	20,0%	0,488
	12. month	0	0,0%	0	0,0%	-

Ki-square test (Fischer test)

Conclusions: This study indicated that both surgical methods, sleeve gastrectomy and roux-en-y gastric by-pass, were successful in the treatment of comorbid factors to morbid obesity such as type 2 diabetes mellitus, hypertension, hyperlipidemia and obstructive sleep apnea. Sleeve gastrectomy may be an alternative surgical treatment method of comorbid factors to morbid obesity.

P.033

THE MAKING OF A BARIATRIC SURGEON. ANALYSIS OF BARIATRIC SURGICAL TRAINING IN THE UK

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Introduction and Objectives: Training in bariatric surgery (BS) is still an evolving field. This study investigated bariatric surgical training model in the UK.

Methods: This was a mixed quantitative (online surveys distributed to 178 UK Consultant Bariatric Surgeons, CBS) and qualitative study (semi-structured interviews with a selection of junior (3) and senior (3) CBS). Approval of Education Ethics Committee was granted (EERP1314-006).

Results: All 53 out of 178 CBS survey respondents (30%) practiced both general and BS for 9 (1-25) and 8 years (1-19) respectively. 81% respondents trained others in BS but only 49% believed that the current training system provides good opportunities to achieve competency in BS. 52.8% believed that a set number of index bariatric procedures performed under supervision should exist prior to granting privileges in practising BS independently but no consensus was achieved on minimum operative numbers (50-300). Interviewed senior CBS obtained broad surgical training in multiple centres but had limited exposure to minimally invasive BS prior to completion of training. All junior surgeons had received supervised bariatric training both during higher surgical training and during their fellowships. Training length varied from 8 to 15 years before obtaining CBS post.

Conclusions: CBS in the UK practise both general surgery and BS, hence training should facilitate achieving competency in both. Setting a minimum number of index bariatric procedures performed under supervision should be considered.

P.034

ENDOSCOPIC MANAGEMENT OF GASTROPLEURAL FISTULA AFTER SLEEVE GASTRECTOMY. REPORT CASE. FUNDACION VALLE DEL LILI. CALI COLOMBIA

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Introduction: Sleeve gastrectomy is the most popular bariatric surgery in Colombia. Results depends of: following, change alimentary habits, exercise. But like any surgical procedure has a problematic complications and rare like gastropleural fistulas with lung abscess. Medical management with nutritional support, stent and posterior dilatation was *described* for brazilians has shown *excellent* results and low *mortality*

Objectives: Describe a successful medical treatment of gastropleural fistula after sleeve

Methods: patient 40 years BMI of 32 without comorbidities who underwent bariatric various procedures without loss of expected weight: 2002 VGB ring prolene, 2010 partial removal of the ring and sleeve sleeve revisional 2013, all these procedures were in other city. 12 months after patient is admitted with weight loss of 20 kg hypoalbuminemia and fever, CT SCAN showed thickening esophagogastric junction. normal endoscopy. nutritional repletion and ATB treatment begins. 3 months after CT SCAN control left

shows subpleural collection which is drained by thoracoscopy. 1 month after the patient with cough when eating, endoscopy was performed showing intrathoracic gastric fistula, CT SCAN with lung abscess and extravasation of contrast. We start management with stent, enteral nutrition and ATB.

Results: 6 weeks later, stent is removed and oesophagogram showed no extravasation, we start liquid diet and endoscopic dilatation # 3. At the time the patient is asymptomatic. Gastropleral fistulas is a rare complication of sleeve, and few groups have enough experience in this pathology, but endoscopic treatment is a safe and effective choice with low morbidity and mortality.

P.036
SEVERE HYPOALBUMINEMIA SECONDARY GASTRIC BYPASS. REVISIONAL SURGERY TO NORMAL ANATOMY

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Introduction: Gastric bypass is an effective surgery specially for sweet eaters. In Colombia perform a short malabsorptive limb 120 cm because we don't have super obese population. But like all mixed procedure has complications secondary to malabsorption, especially albumin, is described that up to 4.7% of patients can hypoalbuminemia mild to severe.

Methods: Patient 24 years old, BMI 46 sweet eater, laparoscopic gastric bypass 18 months ago without complications. First three months the patient developed alimentary disorder and she only drink liquids and she lost 50% EWL on this time, with malnutrition secondary. She was hospitalized for nutritional rearing and psychiatric treatment for phobic disorder to food, in the next five months the patient improved food intake but presented signs of severe hypoalbuminemia with edema, loss hair, she was hospitalized for nutritional recovery per one month because her albumina were 1.9.

Results: To complete nutritional recovery patient underwent revisional surgery to normal anatomy: laterolateral anastomosis of the stomach pouch and anastomosis of malabsorptive handle 50 cm from the Treitz to avoid extensive intestinal resection. 2 days of hospitalization and at the time tolerating normal diet and additional supplementation with protein, physical exam: no edema, no deficit of micro or macro and albumin normal values.

Conclusions: protein-energy malnutrition is treated with diet rich in protein, but may need support with oral and treatment parenteral. If no response would be indicated conversion of the bypass.

P.040
RE-SLEEVE GASTRECTOMY FOR FAILURE OF WEIGHT LOSS AFTER PRIMARY SLEEVE GASTRECTOMY; 3 CASES

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Introduction: Laparoscopic sleeve gastrectomy (LSG) is the leading weight loss procedure for treating morbid obesity. However, failure of weight loss was observed as with all other bariatric procedures.

Methods: We report here, 3 cases of re-sleeve gastrectomy (RSG) for failure of weight loss after primary sleeve gastrectomy (PSG).

Results: First patient with a body mass index (BMI) of 32.9 kg/m² underwent PSG in August 2003. She had an initial drop to BMI 22.4 kg/m² in 2007 and regained weight to BMI of 33.1 kg/m² in 2013, but after the RSG, her BMI was 22.2 kg/m² at 9 months. Second patient with a BMI of 32.6 kg/m² underwent PSG in May 2004. She had a drop in BMI of 27.4 kg/m² in 2005 and regained weight to BMI of 31.4 kg/m² in 2011, but after the RSG, her BMI was 24.4 kg/m² at 24 months. Third patient had with a BMI of 34.0 kg/m² underwent PSG in July 2013. She had a drop in BMI of 27.7 kg/m² in January 2014, but her weight did not change until July 2014. Her BMI had dropped to 23.4 at 1 month postoperatively after RSG.

Conclusions: RSG may be considered as a revision surgery for failure of weight loss after PSG.

P.051
EVALUATION OF CONSTIPATION AFTER GASTRIC BYPASS SURGERY

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Background: There is not much data on bowel habits after gastric bypass surgery. The incidence of constipation should probably not be underestimated. This study investigates the incidence and treatment of constipation.

Methods: From January 2011 to January 2015 patients were reviewed for bowel complaints that necessitated additional treatment. Supplementary, a random sample group from the outpatient clinic was retrospectively studied in a 6 months period to estimate the overall incidence of bowel complaints.

Results: A total of 2635 procedures was performed (80% female). Sixty patients (83% female) presented at the outpatient ward (n=30, 50%), emergency ward (n=5, 8%) or were admitted to the hospital (n=25, 42%) for bowel related complaints. The median hospital stay was 2.5 days (range 1-9, S.D. 2.07). The rate of constipation was 77% (46/60), making an overall incidence of 1.7% (46/2635). Abdominal X-ray was performed in 54% of these patients (n=25) with confirmed constipation in 20 patients (80%). Nine patients (19.7%) had a medical history that predisposed constipation. Three patients (6.5%) reported constipation preoperatively. A random sample of 262 patients with a median follow-up of 2 years (range 1-6, S.D. 0.718), showed 44 patients complaining of constipation (17%). Women were more often affected (37/215, 17%) than men (7/47, 15%), but not significantly (p=0.83).

Conclusions: The frequency of constipation after gastric bypass surgery might be underrated. As constipation can present as a significant clinical problem, future studies should be performed in order to improve knowledge on cause, prevention and treatment.

P.053

THE DESIGN OF A PREOPERATIVE EDUCATIONAL COURSE FOR BARIATRIC SURGERY PATIENTS

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Background: No standardised pre-operative educational course for bariatric surgery patients exists in the UK (British Obesity and Metabolic Surgery Society survey conducted 2014). Pre-operative education is based mainly on clinical experience, with little evidence based research to support its design. We aimed to design an educational course using qualitative research and a structured framework to include information that patients feel are the most important aspects of bariatric surgery and are most keen to be taught about.

Methods: Qualitative interviews were performed on 12 previous bariatric surgery patients, asking their opinion of pre-operative bariatric education. An interpretative phenomenological analysis (IPA) was performed to identify master and subthemes. Once complete, a previously designed educational course was analysed, and content added to include any missing subthemes identified from the IPA. Patient and public involvement (PPI) was then used to assess and evaluate this newly designed educational course.

Results: Themes identified from the IPA included: physical health, psychological health, diet and social factors. New topics not previously included within pre-operative education included: side effects (not complications) of surgery, guilt and shame, accessing psychological support, social life/ eating out, public perception of bariatric surgery, addiction transference and clothing issues. Patient and public involvement was used to evaluate the course which has been used as the intervention in a pilot randomised controlled study with excellent feedback regarding its usefulness and ability to prepare patients for surgery.

Discussion: Although each trust within the UK provides educational material for patients pre-operatively, this is not standardised, and is not always performed in the private sector. In order to give patients equal access to education and preparation around the UK, a standardised educational course would be useful both for research and educational purposes. Using qualitative research and patient and public involvement to design such a course would ensure that it is both useful and of maximum benefit to patients. Further research to evaluate the utility of courses such as this in preparing patients for bariatric surgery is now needed so that education becomes evidence rather than experience based

P.056

COMPLICATIONS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY. 9 YEARS EXPERIENCE.

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Background: Laparoscopic sleeve gastrectomy (LSG) is effective and feasible bariatric/metabolic procedure with low rate of the complications. Bleeding or leak from the staple line or abscess occurred most frequently as early complications. Late complications include strictures, nutritional deficiencies and gastro esophageal reflux (GERD). By reason that the number of patients undergoing LSG will continue to rise the understanding of main complications and available treatment options is essential. The range of bleeding has been reported from 1% to 6,7 %, the staple line leak from 1% to 5,4%, strictures from 1% to 5,7% and GERD from 2,1% to 34,9 % respectively.

Material and method: 302 MO patients (229 females, 73 males) underwent LSG from 2006 to 2014. Average age was 43,2 years (19-65), height was 169,3 cm (151-191), weight was 128,7 kg (96-187) and average BMI was 44,9 (34,1-71,9). T2DM was pre-operatively diagnosed in 69 (22,8 %) patients. 36F bougies were used and all LSG were done with blue load cartridges and without reinforcement or over sewing of the staple line.

Results: Data were collected prospectively and evaluated retrospectively. Average operating time was 84,1 min, two conversion into open surgery because of the bleeding from the spleen. Bleeding from the staple line occurred in 0,7 % (n=2), leak occurred in 0,7 % (n=2), stricture of the sleeve occurred in 0,4 % (n=1) and GERD occurred in 10,3 % (n=31). The bleeding and leak from the staple line were cured laparoscopically with single stitches and with drainage. The short stricture of the middle part of the sleeve was managed endoscopically with balloon dilatation. The patients after LSG with persist GERD were treated with PPI. Average %EBMIL after 24 months reached 68,7 % (24,2-120,9) and average decrease of BMI was 14,1 (4,5-24,1). Diabetes completely resolved in 69,6 % of preoperative diabetic patients during the postoperative period of 24.

Conclusion: The LSG is a safe bariatric procedure with long time good results in both weight loss, and improvement of metabolic comorbidities with low rate of the complications, which could be managed laparoscopically.

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P.065 LAPAROSCOPIC SLEEVE GASTRECTOMY IN MORBID OBESE CHINESE: 5-YEAR RESULTS FROM A SINGLE INSTITUTION IN HONG KONG

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Introduction: Even though Asians have lower rates of overweight and obesity than the Western counterparts, yet in some Asian countries the prevalence of diabetes and similar or even higher than the Western Countries. The risk of type 2 diabetes starts at a lower BMI for Asians than for Europeans. The upper gastrointestinal division of the Department of Surgery of United Christian Hospital, Hong Kong had started laparoscopic sleeve gastrectomy (LSG) in patients with morbid obesity and associated co-morbidities since 2008. We here report the outcomes of all patients who had undergone LSG in our hospital from the beginning of 2008 to the end of 2012.

Methods: During laparoscopic sleeve gastrectomy, five ports were used. The 12mm camera port is usually supra-umbilical, another 12 mm port at the left upper quadrant, one 5 mm in the right upper quadrant and the other 5 mm port is at the left subcostal region. The liver retractor was inserted under direct vision in epigastrium region. The surgeon stands between patient's legs and the two other assistants stand on patient's sides. The pneumoperitoneum pressure used is around 8-10mmHg CO₂. Greater curve of stomach is mobilized from angle of His to antrum by using energy device to divide the gastro-colic ligament. After the antrum pouch was marked 6 cm from the pylorus, the stomach was resected into a narrow gastric tube with linear staples, while a 36 Fr bougie was inserted to the stomach as a calibration tube to avoid stenosis at the lesser curvature. Reinforced metal clips were added between junctions of staples. Air leak test was done by injecting gas into the sleeved stomach while the staple line was covered with water.

Results: During the five-year period a total of 49 patients had underwent sleeve gastrectomy. In all but one patient, who needed laparotomy for control of bleeding from splenic injury, underwent laparoscopic sleeve gastrectomy. The mean BMI at time of the surgery was 39.8±4.8 kg/m². The mean body weight was 105.2 ± 17.1 kg. Out of 49 patients, there were 38 suffered from DM; 19 from OSAS; 11 from GERD and 42 from HT. All the patients are Chinese (17 males and 32 females) with mean age 44.4 ± 8.9 years old. The median operation time is 120 (minimum 55, maximum 299) minutes. The median blood loss is 30 (minimum 5, maximum 200) ml after excluding the case required laparotomy for splenic injury. The mean length of stay was 6.1 ± 2.9day. The maximal percentage of excessive weight loss (%EWL) following laparoscopic sleeve gastrectomy was 64.5 ± 21.4% at 14.3 ± 8 months after the operation. Most patients showed some weight regain after the maximal weight loss, and the mean %EWL during the last follow up was 50.7 ± 23.4% at mean follow-up period of 37 ± 16 months. The means rebound weight was 7.1 ± 7.3kg. The diabetic remission rate was 58% (22/38 patients) In all, except one, DM patients who remained diabetic after gastrectomy had reduced requirement in oral hypoglycemic agents and/or insulin, i.e. 97% (37/38) of all the diabetic patients has either remission in diabetes mellitus or improvement in the condition. In those who have remission in DM after LSG, the mean A1c before and after operation were 6.87 ± 1.8% and 5.69 ± 0.89% respectively (p<0.001), even in those diabetic who remained diabetic after LSG, the mean hemoglobin A1c was significantly better after LSG (8.17 ± 1.16% vs. 7.08 ± 1.32%, p=0.036). The remission rate of hypertension is 26% (11/42). In those reminded hypertensive after SG another 26% (11/42) patients had reduction in requirement of anti-hypertensive. There were also significant reduction in LDL-cholesterol (mean LDL-C 2.79 ± 0.72mmol/L vs. 2.52 ± 0.96mmol/L; P= 0.028) and triglyceride level (mean triglycerides 1.67 ± 0.84mmol/L vs. 1.14 ± 0.54mmol/L; P<0.001) observed, and significant improved HDL-cholesterol level (mean HDL-C 1.67 ± 0.4mmol/L vs. 1.82 ± 0.45mmol/L; P=0.009). The number of patients who were put on PPI increased from 11 to 43. There was no patient required conversion to another bariatric procedure due to severe reflux disease. There was no mortality seen after the operation. There was one case developed diabetic ketotic acidosis shortly after discharge and the patient responded well to medical treatment. There was not leaking or gastric tube stricture noted in this group of patients.

Conclusions: LSG is safe in morbid obese patient and results in sufficient and lasting weight loss, and significant improvement in obesity associated co-morbidities.

COMPARISON OF IRON, TOTAL IRON BINDING CAPACITY AND FERRITIN LEVELS AFTER LAPAROSCOPIC BARIATRIC SURGERY

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Background: Obesity is a worldwide disease affecting more than 300 million adults, BMI greater than 30. The incidence of obesity in Turkey is increasing. Laparoscopic bariatric surgery (Sleeve gastrectomy and gastric plication) is an effective procedure for weight loss. The aim of this study was to investigate patient nutritional deficiencies in terms of iron, total iron binding capacity and ferritin parameters following laparoscopic bariatric surgery.

Methods: A retrospective study was done on preoperative and postoperative laboratory results of randomly selected 100 patients who underwent laparoscopic bariatric surgery since 2011. Standard surgical techniques were used.

Results: Randomly selected 100 patients (female: male=75:25) with a mean age of 38.1 year (range:16-60). Overall average Body Mass Index (BMI) of the patients was 46.9 kg/m². Iron, total iron binding capacity and ferritin levels were compared preoperatively and postoperatively. Decrease in iron and total iron-binding capacity levels and increase of ferritin levels were found statistically significant ($p < 0.0001$).

Conclusions: Nutritional deficiencies resulting from the bariatric surgery can be detected by routine laboratory screening. In this study was to review the current knowledge of nutritional deficits in obese patients and those that commonly appear after bariatric surgery, especially iron, total iron binding capacity and ferritin levels. Our results show that supplementation should suggest routinely.

Keywords: Gastric plication, laparoscopic sleeve gastrectomy, obesity, bariatric surgery, nutritional deficiencies, iron, iron binding capacity, ferritin.

P.073 INTRODUCING THE DA VINCI ROBOT TO A BARIATRIC SURGICAL PRACTICE UTILIZING THE SLEEVE GASTRECTOMY – THE FIRST 10 CASES

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Background: The Sleeve Gastrectomy is an ideal training procedure for introducing the robot into a bariatric surgical practice. This is a review of the first 10 and consecutive Robotic Sleeve Gastrectomies performed at a single institution describing the learning curve and development of a step by step process for the whole operating theatre team.

Methods: Sleeve Gastrectomies were performed as primary and revisional procedures (at least 2 months after removal of gastric bands). Patient demographics, operative times (docking time and time of additional procedures e.g. division of adhesions, cholecystectomy, gastroscopy and hiatus approximation) were reviewed from a prospectively maintained database. Length of stay details and post procedural complications were recorded with a clinical review at 4 weeks post operatively.

Results: 10 Robotic Sleeve Gastrectomies were performed robotically without any significant complications. There were 3 males and 7 females, age range 28-57 years, average BMI was 47.4 kg/m² (range 37.7-63.6) Average docking time was 23 minutes (range 10-43), average procedure time was 128 minutes (range 105-168). The length of stay in hospital was 2 to 3 days.

Conclusion: No learning curve effect on time was demonstrated for the first ten cases though it allowed us to problem solve and develop step by step procedures. Preparation, team work and communication are important factors in performing safe surgery. The robot was found to be especially useful for the over 200kg patients. A skilled assistant is essential.

P.077 LAPAROSCOPIC BARIATRIC PROCEDURES WITH THE SURGEON IN SITTING POSITION

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Background: The advantages of Robotic surgery in comparison to standard laparoscopic surgery is the ability to do surgery in sitting position and 3D view and the ergonomic of movement and third hand assistance but the disadvantages is one field surgery, the presence of a second surgeon in the field, extra expenses, the elongated time and absence of tactile sensation and the disadvantages of standard laparoscopic surgery is increased musculoskeletal complaint.

Methods: I report my experience in the field of Laparoscopic surgery at the American University of Beirut Medical Center and affiliated hospitals where I shifted all laparoscopic procedures including Bariatric procedures to sitting position with 100% completion of the procedures in the first 600 bariatric cases.

Results. Laparoscopic sitting position will allow you to do long list surgery with decreased muscle fatigue, back and knee pain.

Conclusions: Therefore, laparoscopic surgery is feasible in the sitting position and can maintain all the advantages of standard laparoscopies and avoid the disadvantages of Robotic surgery.

P.080

LAPAROSCOPIC GASTRIC PLICATION FOR THE TREATMENT OF MORBID OBESITY

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Background: Gastric Plication

Methods: The treatment of morbid obesity that include Laparoscopic Gastric Band, Roux-En-Y, Gastric Bypass, Mini Gastric Bypass and Sleeve Gastrectomy.

Results: I report the first 100 cases done at the American University of Beirut Medical Center and affiliated hospitals with Laparoscopic Gastric Plication with no complication and EWL of 70% in 1 year.

Conclusions: Thus, procedure is safe on reversible and low complication.

P.082

LAPAROSCOPIC REVISION OF GASTRIC BAND TO GASTRIC ROUX-EN-Y BYPASS

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Background: Laparoscopic revision of gastric band to gastric roux-en-y bypass

Methods: More than 65 cases done at the American University of Beirut Medical Center for revision of Gastric Band to Gastric Bypass secondary to complications of Gastric band including slippage, pouch dilatation, pseudo achalasia and weight failure in sweet eater. The average operation time is 75minutes. All did well and discharged home within 48 to 72hrs.

Results: The revision of Gastric Band to Gastric Roux-En-Y Bypass is feasible, safe if done by experienced surgeon in Bariatric surgery.

Conclusions: This video will show all the technical detail of removal of the band and Gastric Roux-en-Y Bypass creation.

P.088

IMPACT OF BARIATRIC SURGERY ON OBSTRUCTIVE SLEEP APNOEA- A PROSPECTIVE STUDY

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Background: There is a high prevalence of obstructive sleep apnea (OSA) among morbidly obese patients. Bariatric surgery has been reported to have a significant impact on symptoms of sleep apnea. However, its impact on objective parameters like Apnea-Hyperapnea Index (AHI) has been studied only in few series. We conducted a prospective study to evaluate the impact of bariatric surgery on day time sleepiness of OSA as well as AHI.

Methods: 27 patients were included in the study after a written informed consent. Patients underwent evaluation for OSA using Epworth Sleepiness Scale (ESS) scoring and overnight polysomnography. The evaluation was repeated at 3 months post operatively.

Results: Out of 27 patients, 6 were males and 21 were females. The mean BMI of the patients preoperatively was 48.4 ± 8.2 . OSA, based on an AHI > 5/hour, was present in 26 (96.3%) patients. However, excessive daytime somnolence (ESS>10) was found in only 8 patients. The mean pre-operative ESS score and mean AHI was 8.9 ± 3.2 and 31.8 ± 20.4 events/hour respectively. At 3 months after bariatric surgery, mean BMI of the patients reduced to 39.6 ± 7.8 Kg/m². There was a statistically significant reduction in mean ESS score and AHI which reduced to 4 ± 2.2 and 20.2 ± 3.1 events/hour respectively.

Conclusion: Day time somnolence symptoms are a poor predictor of OSA. Following bariatric surgery, there is a significant improvement in mean ESS score and mean AHI.

P.102
SIDE EFFECTS OF PROPHYLACTIC ADMINISTRATION OF URSODEOXYCHOLIC ACID AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background/Aim: An increased risk of gallstone formation has been linked to obesity and weight loss after bariatric surgery. A meta-analysis demonstrated that ursodeoxycholic acid (UDCA) can prevent gallstone formation after bariatric surgery. However, side effects were reported to occur in 25% of the patients after Roux-en-Y gastric bypass. The aim of this study was to investigate whether prophylactic administration of UDCA frequently induces the side effects in Japanese obese patients after laparoscopic sleeve gastrectomy (LSG).

Methods: Between 2011 and 2014, 59 Japanese obese patients underwent LSG in our institute. This study enrolled 47 obese patients treated by LSG who did not receive past or concomitant cholecystectomy. UDCA 600 mg/day was administered to each patient after LSG for 6 months.

Results: The side effects occurred in 8 of the 47 patients (17%) 2 days-2 months after beginning of the intake. The symptoms were nausea in 3 patients, nausea and diarrhea in 2, diarrhea in 2 and upper abdominal pain in one. Univariate analyses using Fisher's exact test showed that gender (female) was significantly related to occurrence of the side effects ($p < 0.05$).

Discussion: Side effects of UDCA 600 mg/day occurred in 3–6% of Japanese non-obese patients with gallstones, and the most symptoms were tolerable. Some literatures demonstrated that bariatric surgery including LSG increases serum bile acid level and could influence enterohepatic circulation of bile acid.

Conclusion: The side effects of UDCA administration after LSG may occur more frequently compared to the normal population, due to changes in the enterohepatic circulation.

P.103
UNUSUAL COMPLICATIONS IN BARIATRIC SURGERY: A CASE REPORT

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Background: Although different types of visceral and vascular injuries have been reported using veress needle, it is still used widely to create pneumoperitoneum.

Case description: This is a 19 year old female patient with body mass index of 47kg/m² who was admitted for laparoscopic sleeve gastrectomy. Unfortunately, the patient sustained aortic injury by the veress needle. The aorta was repaired through an immediate laparotomy. Post operatively the patient had malignant hyperthermia which was treated by dantrolene sodium. However, she developed severe rhabdomyolysis followed by an acute renal failure and severe necrotizing pancreatitis. Following multiple laparotomies for debridement, patient sustained disseminated intravascular coagulation and died due to uncontrollable bleeding.

Conclusions: Veress needle should be avoided as an access for pneumoperitoneum in laparoscopy, especially in morbidly obese patients. Malignant hyperthermia is a fatal complication that may cause death if not treated promptly.

P.108
MALE SEXUAL FUNCTION BEFORE AND AFTER BARIATRIC SURGERY: A CROSS-SECTIONAL STUDY

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Background: The prevalence of male sexual dysfunction in patients after bariatric surgery is not well described. Aim of this study was to compare the prevalence of erectile dysfunction (ED) and sexual quality of life after surgical weight loss with controls seeking bariatric surgery.

Methods: International Index of Erectile Function and Sexual Quality of Life–Male (SQoL-M) questionnaires were administered during the postoperative 12 months by e-mail to 153 men who had undergone weight-loss surgery (postoperative group). Controls were 34 men

who were asked to complete the questionnaires during their preoperative evaluation (preoperative group). Higher score indicates less dysfunction and better sexual quality of life. P -values < 0.05 were considered to be statistically significant.

Results: 54% of men in preoperative and 20% of men in postoperative group presenting severe to mild erectile dysfunction (ED). The median (Q1, Q3) EF score differs significantly between the preoperative (25.0 [17.0, 29.0]) and postoperative groups (28.5 [26.0, 30.0]). Median scores in domains of sexual desire (SD), intercourse satisfaction (IS) and overall satisfaction (OS) were significantly higher in the postoperative group. There were no differences in orgasmic function (OF) scores. The median SQoL–M was significantly higher in the postoperative group. (84.8 [51.5, 89.4] vs 88.65. [84.8, 90.9])

Conclusions: The study provides new information about the prevalence of ED in the group of patients after bariatric surgery. Higher SQoL–M scores in postoperative group suggest the beneficial effect of surgical weight loss on male sexual quality of life.

P.109

RESIDENT TRAINING IN BARIATRIC SURGERY – A NATIONAL SURVEY IN THE NETHERLANDS

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Background: Surgical procedures for morbid obesity, including laparoscopic gastric bypass (LGBP), are considered standardized laparoscopic procedures. Our study goal was to determine how bariatric surgery was taught in our country.

Methods: Lead surgeons from all bariatric centers in the Netherlands were sent questionnaires. A minimum of 2 residents or fellows were surveyed for each center. Centers without resident training were excluded.

Results: Surgeons from all 19 centers participated in the study (100%) and answers from twelve respondents working in resident teaching centers were analyzed. The average number of trained residents/fellows was 14 (range 3-33). LGBP was the preferred procedure in 10 centers, laparoscopic sleeve resection in 1 center, and in 1 center both procedures were taught equally. The order in which procedural steps were taught could be divided into 3 groups: unstructured, entero-enterostomy/pouch/gastro-enterostomy or pouch/gastro-enterostomy/entero-enterostomy. A mean number of 4 trocars were used (range 3-5). Questionnaires were returned by 27/35 residents and fellows (77%). On average, residents started training in bariatric surgery in the 4th training year. The median number of bariatric procedures performed was 38 for residents (range 0-247) and 105 for fellows (range 16-275). The median number of assisted procedures was 52 (range 8-1100). On average, residents closed the gastro-enterostomy defect in the 4th training year (range 2nd-6th year).

Conclusions: Training of residents and fellows in bariatric surgery differs considerably among centers. A structured program should be developed for efficient training in bariatric teaching centers.

P.110

AUDIT OF SUBMISSION OF DATA TO THE NATIONAL BARIATRIC SURGERY REGISTRY(NBSR)AT HOMERTON UNIVERSITY HOSPITAL(HUH) UK.

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Background: In UK, NBSR demonstrates a level of safety for Bariatric surgery. It monitors the effectiveness of bariatric surgery in the improvement of Type 2 Diabetes, sleep apnoea and circulatory disease, and ensures improved cost effectiveness. In April 2013 submission of 100% of the data to the NBSR became mandatory in the United Kingdom. A completed audit of submission of data to NBSR is presented, with recommendations to aid the compliance.

Methods: All bariatric surgeries performed at HUH in February 2014 were audited to verify if surgical data, discharge data and 6 monthly follow-up data were submitted to the NBSR, following an initial audit results from March 2013. Comparison is made between 2013 and 2014 NBSR data entry.

Results: In both 2013 and 2014, completion of operative data was 100%. In 2014, 77% patients had complete discharge data entered compared with 57% in 2013. At 6 month follow up, there was a drop from 74% data entry in 2013 to 62.5% in 2014. The patients who failed to attend their follow up appointment at 6 months increased from 9% in 2013 to 67% in 2014.

Conclusion: NBSR data is necessary to prove to the general public and commissioning boards that bariatric surgery is indeed cost effective, safe and successful. 100% compliance with NBSR data entry is essential in capturing the outcomes of bariatric surgery. We will continue to audit our practices of data entry to improve compliance.

P.111
CARDIOVASCULAR RISK IN PATIENTS WITH HYPERTENSION ON THE BACKGROUND OF MORBID OBESITY AND ITS MEDICATION, NON MEDICATION AND BARIATRIC CORRECTION

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Background: The rate of obesity is rising logarithmically, especially morbid obesity (BMI>40kg/m²) (more than 40 kg per square meter). In Ukraine, the obesity rate is 40%, the level of morbid obesity is about 2%. Obesity is associated with early atherosclerosis, increased risk of myocardial infarction and heart failure, cause of cardiovascular deaths, particularly in extreme weight categories. The higher the BMI the higher mortality rate.

Methods: We examined 164 patients with morbid obesity (BMI > 40 kg/m²), they formed two groups. The first group included 81 patients who treated obesity with diet and drug "Stifimol". The second group included 83 patients who underwent bariatric surgery (gastric bypass surgery). Patients were examined before and 6 months after treatment of obesity. All patients underwent clinical examination, determination of anthropometric parameters, measurement office SBP and DBP and daily monitoring of blood pressure, cardiac ultrasound, exploration indicators carbohydrate and lipid metabolism, definitions cardio - vascular risk with using scales SCORE, SCORE_{HDL}, SCORE_{BMI}, PROCAM, DRS, FRAMINGHAM.

Results: Found that after 6 months of treatment, patients in both groups experienced a significant reduction in body weight. A significant decrease in body weight was observed in patients treated surgically (first group patients was a reduction in body weight of 5,5 kg (4,6%) patients in second group 35 kg (22,8%) which was associated with a greater reduction in office SBP, DBP, optimization daily profile of blood pressure, more reduction of LV hypertrophy, more positive changes in lipid and carbohydrate metabolism and associated with reducing the number of patients at very high risk on a scale SCORE by 78 %, on a scale PROCAM by 100 %, on a scale FRAMINGHAM by 95,6% and on a scale DRS by 13 % compared with patients who were treated conservatively .

Conclusions: Weight loss through the use bariatric surgeries contributes to normalization office SBP, DBP, BP profile, reduces left ventricular hypertrophy, positive effect on lipid, carbohydrate metabolism and decrease in cardio-vascular risk.

P.120
CALIBRATED HAND-SEWN GASTROJEJUNOSTOMY STANDARDIZATION FOR ROUX EN Y GASTRIC BYPASS

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Background: Gastric bypass is a predominantly restrictive bariatric procedure. Nevertheless, the hand-sewn gastrojejunal anastomosis (GJA) is not standardized and reproducible for a 12 mm diameter. Objective: to validate the hypothesis that GJA will maintain less than 12.5 mm with a standardized protocol.

Methods: Non randomized prospective study. From October 1999 to March 2007, 1200 patients were submitted to RYGB and 120 were prospective analyzed by endoscopy during 5 years of follow-up. The 12 mm diameter of the GJA is reached by cutting the stapler line in 15mm from the end of the gastric pouch with the harmonic scalpel. The GJA was evaluated annually by endoscopy.

Results: 120 patients were enrolled in the study. 75% were women (18-58 y/o). Mean BMI was 42±2,3; There was no mortality. Mean GJA was 12±2,05 mm (3 to 16mm). Mean pouch was 3,5±0,97 cm. GJA was: a) less than < 10 mm in 11%; b) Less or equal than 12mm in 21%; c) 12-13 mm in 39%; d) 13-14mm in 20%; e) > 14mm in 9%.

Conclusions: Our results demonstrate that one can perform a RYGB obtaining a standardized GJA even without the ring or circular stapler.

P.121
SLEEVE GASTRECTOMY PERFORMED WITH MINIMAL MORBIDITY BY A SINGLE COMMUNITY SURGEON: A SERIES OF 575 CONSECUTIVE CASES

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Background: Laparoscopic sleeve gastrectomy (LSG) combines an effective primary treatment for morbid obesity and less morbidity when compared to other surgical options. Technique plays an important role in preventing perioperative complications.

Methods: Retrospective review of 575 consecutive patients who underwent LSG. A 36F bougie was used with gastric transection beginning 5cm from the pylorus avoiding narrowing of the gastric outlet. Complete fundic excision was performed. In all cases, green staple loads (4.1/2.0) and a synthetic bioabsorbable material (GORE® SEAMGUARD®) was used to reinforce staple-lines.

Results: Mean age and BMI were 43.4 years (range 16-63) and 46 kg/m² (range 33-83). Mean operating time was 52 minutes (range, 29-200); and 571/575 patients were discharged the afternoon after surgery. There were no postoperative leaks or bleeding. One reoperation for dysphagia related to a concomitant hiatal hernia repair. There were 4 re-hospitalizations, none of which were related to the staple line. Average % EWL was 61.27 and 65.07 at 1 and 2 years.

Conclusions: In this initial series, LSG using staple-line reinforcement had an overall 0% leak and bleeding rate. Significant weight loss was achieved and was comparable to that with gastric bypass. Using the technique described, LSG is an efficacious procedure that can be done with minimal morbidity by a properly trained community based bariatric surgeon.

P.123 ASSOCIATIONS BETWEEN PHYSICAL ACTIVITIES ASSESSED BY Pedometer, 6- MINUTE WALK TEST AND MARKERS OF METABOLIC SYNDROME IN OVERWEIGHT AND OBESE TUNISIAN ADOLESCENTS

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Objectives: The aim of this study was to study the association of physical activity (PA) measured by pedometer and the 6-minute walk test (6MWT) with the metabolic syndrome (MS) components, in a sample of overweight and obese adolescents from Sfax City (Tunisia).

Methods: Fifty-one voluntary (28 girls and 23 boys), healthy, overweight or obese adolescents (age, 16,8 ± 0.69 years) participated in the study . MS was defined with the International Diabetes Federation (IDF) criteria. PA was monitored with pedometer (Digi-Walker SW-200; Yamax Co, Tokyo, Japan). The 6MWT was conducted according to a standardized protocol.

Results: The frequency of MS was 21.6%. Subjects without MS accumulated significantly more steps/day measured by pedometer and in the Walking distance in the 6MWT than subjects with MS: (9648, 25±2297, 726vs 7365, 91±1505, 65 steps/day respectively; p= 0, 02) and (720, 75±105, 89 vs. 644, 55±71, 04 m, respectively; p =0, 03). Pedometer determined steps/day was inversely correlated with Waist Circumference (WC), Blood Pressure (BP) and Triglycerides (P<0.05). The 6MWT was inversely correlated with WC (P<0.01), Triglycerides (P<0.01), B P (P<0.05) and positively correlated with HDL-C (P<0.05).

Discussion: The results presented in this study show that associations and interactions between physical activity, aerobic capacity and the markers of metabolic syndrome can be observed at an early age and can provide important insights into the aetiology of metabolic disease patterns. A more physically active lifestyle with an increase of the aerobic capacity appears to be associated with lower probability of metabolic syndrome.

P.127 DUODENAL-JEJUNAL BYPASS SLEEVE SYSTEM PLACEMENT: REPORT OF A SEVERE COMPLICATION LEADING TO LEFT LIVER LOBECTOMY

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Background: Duodenal-jejunal Bypass sleeve (DJBL) is a promising minimally invasive endoscopic device able to induce at least 10% excess weight loss in 12 weeks. Its indications are uncontrolled type 2 diabetes and obesity. If maintained for a long time, risks of long term complications should be considered.

Methods: A 54-year-old male non-diabetic patient, weight 120 Kg, BMI: 33 Kg/sqm, in February, 2014, underwent a duodenal-jejunal bypass sleeve (DJBL) for morbid obesity. 10 months later during a holiday he was admitted to the emergency department of our hospital for fever, vomiting and epigastric pain. Diagnostic workup included a CT scan, that revealed enlargement of the left hepatic lobe, and a large (diameter: 8 cm) abscess in segment S2–S3. A Gastrografin swallow suggested the partial obstruction of the device, with evidence of several duodenal folds.

Results: Despite US-guided percutaneous drainage of the abscess, endoscopic removal of the device and antibiotic treatment, high fever and septic state persisted, and the patient underwent surgery. At operation was found a large abscess close to the lesser gastric curvature, remnants of previous duodenal covered perforations, and multiple left hepatic lobe abscesses, and a left lateral sectionectomy was performed. Follow-up was uneventful and he patient was discharged on the 7th day.

Conclusions: If DJBL is placed without a pre-surgical strategy and for a long time, risks of severe late complications may occur, even without specific damages of the device. Patients should be warned on possible complications that may occur with long standing DJBL.

P.128
LAPAROSCOPIC SLEEVE GASTRECTOMY, 200 CASES WITHOUT A LEAK: SHORT-TERM RESULTS, COMPLICATIONS AND TECHNICAL CONSIDERATIONS.

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Background: Morbid obesity has become a major health problem in Saudi Arabia. Laparoscopic sleeve gastrectomy is an accepted method among bariatric surgeons for treating morbidly obese patients with a reduced rate of complications. We describe results of a single surgeon's experience in our institution with LSG revealing a low complication rate and describing the surgical technique.

Methods: LSG was performed in 200 consecutive patients from June 2014 to February 2015.

A technique is described where all operations were performed with avoiding strictures at the incisura angularis and stapling close to the esophagus at the angle of His.

All operations performed used over sewing of the staple line.

Results: Follow-up data was collected for all patients at 12 weeks. A total complication rate of 4.1% and a 1.3% 30-day readmission rate were observed. No leaks occurred in any of the 200 patients. The most common complications were nausea and vomiting with dehydration. The percentages of excess weight loss were 38.3, 57.8 and 64.4 with a follow-up of 68%, 61%, and 47% at 6 months

Conclusion: LSG can be performed for treatment of morbid obesity with a low complication rate. Surgeons performing LSG should minimize the risk of creating strictures at the incisura angularis and stapling near the esophagus at the angle of His.

P.129
PORTAL VEIN THROMBOSIS AFTER LAPAROSCOPIC BARIATRIC SURGERY IT'S A RARE COMPLICATION BUT SHOULD BE CONSIDERED. DESCRIPTION OF THREE CASES WITH LITERATURE REVIEW.

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Background: Portal Vein Thrombosis (PVT) refers to an obstruction in the trunk of the portal vein it's an uncommon complication after Laparoscopic Bariatric Surgery (LBS) However it is a potentially life-threatening condition reported after laparoscopic bariatric surgery. Clinical symptoms may be insidious, and progression can lead to intestinal infarction and portal hypertension.

Main Outcome Measures: Systematic review of the literature on PVT after LBS and report three cases encountered at our institution.

Patients and Methods: We reviewed the literature between January 1990, and January 2015, using the search terms portal vein thrombosis, mesenteric venous thrombosis, laparoscopic surgery and bariatric surgery.

The inclusion criteria were documented PVT by imaging studies such as angiography, ultrasonography, computed tomography [CT], or magnetic resonance imaging (MRI) or surgery following LBS.

We include three cases after laparoscopic sleeve gastrectomy from our institution.

Results: One developed a chronic cavernoma with extension of the thrombus to the superior mesenteric vein and splenic vein, the other two cases recovered using anticoagulation therapy.

Conclusions: PVT is a rare complication after LBS, however Laparoscopic surgeons should be aware of the risk of PVT, and it should be suspected in cases with an atypical outcome after LBS. Once PVT is diagnosed, prompt anticoagulation therapy may resolve the thrombotic event.

P.131
AN OPTIMIZED MULTIVITAMIN SUPPLEMENT LOWERS THE NUMBER OF VITAMIN AND MINERAL DEFICIENCIES ON THE LONG-TERM: FOLLOW-UP OF A RANDOMIZED CONTROLLED TRIAL

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Background: Vitamin and mineral deficiencies are common after Roux-en-Y gastric bypass. An optimal multivitamin supplement (WLS Forte®, FitForMe, Rotterdam, the Netherlands) was developed which was able to reduce the number of iron and vitamin B12 deficiencies after one year. The present study builds on the initial study and evaluates the long-term effectiveness and safety of WLS Forte® after RYGB.

Methods: A single center prospective trial was conducted comparing WLS Forte®, a standard multivitamin supplement (sMVS), and a group of non-users. A sMVS was defined as an over-the-counter available MVS.

Results: In total 137 patients visited the outpatient department for blood withdrawals; 64 (47%) were using WLS Forte®, 45 (33%) a sMVS, and 28 (20%) did not take any kind of MVS. Baseline characteristics were comparable between groups. Serum ferritin levels were different between WLS Forte users and sMVS users, $116 \pm 117 \mu\text{g/L}$ vs. $75 \pm 85 \mu\text{g/L}$. Significant more patients were diagnosed with an anemia (16% vs 3% [$p=0.021$]), ferritin (14% vs. 3% [$p=0.043$]), and zinc (8% vs. 0% [$p=0.033$]) deficiency in the sMVS group compared to WLS Forte®. Additional, a non-significant difference was found regarding vitamin B12 deficiencies (0% for WLS Forte® vs. 7% for sMVS [$p=0.076$]). No adverse event occurred which were related to supplement use.

Conclusions: On the long-term WLS Forte® is safe and reduces anemia, ferritin, and zinc deficiencies after RYGB. There was an trend towards less vitamin B12 deficiencies when taking WLS Forte® compared to a sMVS.

P.135 ‘YOUNG’ BARIATRIC SURGEONS HAVE SURGICAL OUTCOMES COMPARABLE TO THEIR ‘MORE MATURE’ COLLEAGUES

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Introduction: The public reporting of surgeon specific outcome data may be an additional burden for young bariatric surgeons. It may affect their patient selection, carrier progression and revalidation.

Objective: To compare outcomes of ‘Young’ and ‘More mature’ bariatric consultant surgeons practicing in the NHS (England) using the Surgeon Specific Outcome Report 2014 (SSOR).

Methods: Available data from SSOR for each individual bariatric surgeon was collated. Surgeons were divided into 2 groups depending on their primary medical qualification date which was obtained from the GMC website. Bariatric surgeons, currently under 45 years, have to have graduated at or after 1992. The results of the 2 groups were analysed.

Results: 138 surgeons contributed to the SSOR. Of these, 66 surgeons were identified as ‘Young’. There was no significant difference in the median number of operations, length of stay (band, bypass, sleeve) and BMI between the two groups. ‘Young’ surgeons did not differ from their ‘More Mature’ colleagues with regards to the percentage of revisional procedures undertaken. There was a significantly higher percentage of OSMR 0 and 1 gastric bypass patients being performed by the ‘Young’ surgeons (46.5% vs 40% $p:0.02$). This was not significantly different for patients undergoing sleeve gastrectomy (LSG). There was no statistical difference in the percentage of OSMR 4 and 5 having LSG or bypass in either group.

Conclusion: Currently in England, there is no evidence of major differences between the ‘Young’ and ‘More Mature’ groups in terms of patient selection and outcomes after bariatric surgery according to SSOR.

P.138 REFRACTORY MARGINAL ULCERS AFTER GASTRIC BYPASS: OPERATIVE MANAGEMENT

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Background : Marginal ulcer is a significant complication after Roux-en-y gastric bypass (RYGB) performed for morbid obesity. Up to one third recurs or persists after medical therapy and will need surgery.

Objective: The aim of the present study was to review the experience of our unity with reoperations for recurrent or persistent marginal ulcer.

Methods: The medical records of all patients who underwent surgical management for recalcitrant or recurrent marginal ulcer from 2000 to 2013 after having undergone gastric bypass for morbid obesity were retrospectively reviewed.

Results: A total of 26 patients required revision of their gastrojejunostomy. Mean time from primary gastric bypass to reoperation was 11 months. Revisional surgery was performed laparoscopically in 22 patients (85%). Resection of the gastrojejunostomy encompassing the ulcer, downsizing of the gastric pouch and reconstruction was performed in all patients. A gastrogastric fistula was transected in 8. No patient died. Post-operative morbidity rate was 8%. At a mean follow-up of 25.6 months 24 patients were symptom free and 2 patients developed a recurrent marginal ulcer. These 2 patients underwent iterative surgical revision of the gastrojejunostomy and resection of the gastric remnant and were subsequently symptom free.

Conclusion: Surgical revision, including downsizing of the proximal gastric pouch and reconstruction of the gastrojejunostomy in a well vascularised tissue, is a safe and effective procedure for patients with refractory or recurrent marginal ulcer. Remnant gastrectomy should be performed in patients with recurrent MU after revision.

P.142

POST-SURGERY GROUP SUPPORT FOR BARIATRIC PATIENTS: AN EXPERIENCE IN BRAZIL

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Introduction: Support groups have the objective of helping people to deal with similar problems, by sharing their personal experiences and committing themselves to take part of a cohesive and supportive process.

Objective: Report the experience of a psychological support group with patients who underwent bariatric surgery.

Methods: The project, which took place in a private clinic in Brazil, was structured in seven monthly meetings of two hours, with specific matters related post-surgical issues. This group is open for patients undergoing bariatric surgery regardless of surgical time, gender and surgical technique. One of the seven meetings was also open to family members. After each encounter, the patients were invited anonymously to review the work and provide suggestions for the next groups.

Results: Group 1 worked on the continue need of nutritional education and possible etiologies and contexts related to depressive and anxiety symptoms after surgery. Group 2 discussed the need for gradual weight loss and the challenges of this period, such as the recovery of self-esteem. Group 3 talked about the possible exchange of compulsive and impulsive symptoms that can harm the results of surgery. Group 4 debated the symptoms and eating disorders related to surgical failure, mainly: grazing, bulimia, soft food and caloric liquids. Group 5 discussed weight regain, especially, known behavioral causes, such as grazing, excessive drinking and caloric pasty, physical inactivity, depression, anxiety and lack of multidisciplinary approach. Group 6 worked on body image reconstruction, regarding to issues related to real and ideal body, major distortions, the possibility of dissatisfaction with the new body and possible reconstructive surgery. Group 7 discussed social and family support.

Conclusion: We consider that the support groups were an important protection factor for a number of postoperative emotional problems.

P.143

VALIDATION OF DIABETES SURGERY SCORE IN OUR PATIENTS OF PREDOMINANTLY CAUCASIAN ETHNIC ORIGIN: PRELIMINARY RESULTS FROM HOMERTON UNIVERSITY HOSPITAL, UNITED KINGDOM.

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Background: Diabetes Surgery score is a multidimensional scoring system, it predicts the effectiveness of Bariatric surgery in the treatment of Diabetes Mellitus II. The score ranges from 0(lowest) to 10 (highest). A higher score has a better chance of remission. The Scoring system was validated in our patient population which comprises predominantly of Caucasian ethnic origin.

Methods: Retrospectively collected data included Age, BMI, C-peptide and duration of diabetes of 40 patients operated between January 2014 to October 2014. Data also included the type of surgery and ethnic origin. The mean follow up was 7 months(range 5-9months). Diabetes remission is defined as a blood glucose level of less than 110mg/dl(<6.0 mmol/L) and or HbA1C of < 6.0%, without the use of anti-diabetic medication.

Results: 27 patients(67.5%) had RYGB, 13(32.5%) had sleeve gastrectomy. 31(77.5%) were Caucasians, 8(20%) were afroCaribbean and 1(2.5%) was Asian. 2.5% had a score of 9(with 100%)in remission. 20% had a score of 8(with 85.7%)in remission, 22.5% had a score of 7(with 88.9%)in remission, 20% had a score of 6(with 87.5%)in remission, 10% had a score of 5 (with 40%)in remission, 22.5% had a score of 4 (with 12.5%)in remission, 5% had a score of 2 (with 0%)in remission.

Conclusion: Our results confirm a greater chance of diabetes remission with higher surgery scores in predominantly Caucasian population at an earlier follow up.

P.145
DUODENAL-JEJUNAL BYPASS IMPROVES NON-ALCOHOLIC STEATOHEPATITIS (NASH) IN A DIET-INDUCED RAT MODEL

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Backgrounds: Due to increase of obesity population, non-alcoholic steatohepatitis (NASH) is becoming an important disease as major cause of the hepatocellular carcinoma. We aimed to develop a diet-induced NASH model rat and to elucidate the therapeutic effect of duodenal-jejunal bypass (DJB) for NASH.

Methods: Five-week-old male SD rats were fed with high-fat diet (HFD) for 12 weeks. A part of them were sacrificed at that point, and the liver specimens were evaluated as baseline by comparing them with those of rats fed normal chow (Ctl). The others received DJB or sham (SH) operation, and were sacrificed 16 weeks later. The NASH features were evaluated using the NAFLD Activity Score (NAS).

Results: In the HFD group, the liver weight and the value of alanine transaminase (ALT) were higher than Ctl group (5.7 vs 2.6 g/100gBW, 74.5 vs 19.5 IU/L). NAS was 5.2 points on average and it satisfied the NASH criteria. Comparing DJB group with SH group, they showed improved values in the liver weight, ALT and NAS (3.6 vs 4.8 g/100gBW, 44.8 vs 181 IU/L, 2.4 vs 5.1 points). In addition, plasma chenodeoxycholic acid (CDCA), which is one of the component of the bile acid and is thought to be a remedy for NASH, was significantly higher in the DJB group (3.16 vs 1.04 μ mol/L).

Conclusions: DJB would have an improvement effect for NASH, and an increase of serum bile acid, especially CDCA, would be involved in that mechanism.

P.146
COMPLICATIONS IN MINI GASTRIC BYPASS- OUR EXPERIENCE

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Background: In recent years MGB has fast become a popular procedure in bariatric surgery, especially in India. The reasons for its popularity are its ease, one anastomosis and less likelihood of leaks and internal herniation. The outcome of the surgery is satisfactory with good weight loss and resolution of metabolic syndrome. It is also a potentially reversible procedure. However, there are certain complications that are possibly increased in MGB such as marginal ulceration, bile reflux and nutritional deficiencies.

Methods: In our retrospective study between 2012 December to 2014 March, we performed 106 cases of MGB. The technique was similar in all cases whereby a long sleeve was created based on lesser curve that was anastomosed with a loop of jejunum 180 to 300 cm from DJ flexure (depending on the BMI of the patient). All cases were given postoperative supplementation according to our standard protocol.

Results: No patient died. We had the following complications

1. Bleeding from sleeve staple line – 2 cases
2. Efferent limb obstruction- 1 case
3. Stenosis of the remnant stomach at the level of the first vertical fire leading to the obstruction of the remnant- 1 case
4. Protein deficiency – 14 cases
5. Iron deficiency anemia- 16 cases**
6. Vitamin D deficiency- 12 cases
7. Vitamin B12 deficiency- 14 cases
8. Hypoglycemia- 3 cases
9. Diarrhea/steatorrhea – 5 cases
10. Dumping syndrome - 6 cases

Conclusions: MGB is a simple and effective bariatric procedure. However counseling, monitoring and supplementation is essential to prevent and treat complications. It is likely that nutritional complication occur more often after the more malabsorptive procedures Aggressive post-op follow-up and surveillance is indicated.

THE BARIATRIC PROCEDURE FOR NIBBLING AND BINGE OBESE PATIENTS. A MULTIDIMENSIONAL STUDY.

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Background: Many follow-up studies underline that obese subjects with binge and nibbling eating behaviors have a poor outcome after bariatric surgery. The aim of this study is to show the specific disorders of the mental dimensions related to the eating behaviours determining failure after bariatric surgery and the connected therapeutic program.

Methods: 107 binge obese subjects (M age: 32.7; M BMI: 43.8; f/m:86/21) and 107 nibblings (M age: 35.5; M BMI: 45; f/m:81/26) were enrolled in this study. They underwent diagnostic assessment for bariatric surgery including: psychiatric examination to exclude mental disorders, structured interview for eating behavior and psychodiagnosis assessing mental dimensions: Binge Eating Scale (BES) and Barratt Impulsiveness Scale (BIS-11) for impulsiveness, Beck Depression Inventory (BDI-II) for depression, Body Uneasiness Test (BUT) for body image, State Trait Anxiety Inventory (STAI-Y 2) for anxiety.

Results: Binge show: BES= 30.3; BIS-11 TOT=80.6; BUT subscales: CSM=2.2 BIC= 3.9 WP= 3.5 GSI=3.2; BDI=24.3; STAI-Y2= 53.6. Nibbling show: BES=10.5; BIS-11 TOT= 54; BUT subscales: CSM= 1.4 BIC= 2.8 WP=2.6 GSI= 2.1; BDI=11.9 STAI-Y2=41.3.

Conclusions: Nibbling subjects have a medium disorder of body image, associated with moderate depression and mild anxiety. Binges show a high disorder of every examined mental dimensions. The therapeutic program for bariatric surgery is: psychotherapy associated with bariatric surgery for nibbling; psychotherapy/psychopharmacology for binges before surgery.

P.151 QUALITY OF LIFE AFTER GASTRIC BANDING AND GASTRIC BY-PASS FOR MORBID OBESITY: A PROSPECTIVE COMPARISON.

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Introduction: Among bariatric surgery evaluation criteria, improvement in quality of life (QoL) surely represents the most important. However, the lack of reliable evaluation models has significantly limited the research in this field. The aim of this study is to prospectively compare QoL after Roux-en-Y gastric bypass (RYGB) and laparoscopic adjustable gastric banding (LAGB)

Methods: 35 patients submitted to RYGB at Parma Hospital and 35 patients submitted to LAGB at the “Clinica Città di Parma” were enrolled in the study. Patients were prospectively submitted to one preoperative and 4 postoperative (1, 3, 6 and 12 months) clinical evaluations including two psychodiagnostic tests: the Short Form 36 (SF-36) testing the quality of life and the Bariatric Surgery Satisfaction Questionnaire (BSSQ) assessing the satisfaction for the intervention.

Results: Both interventions produced a significant amelioration of biometric and clinical data (significantly higher for RYGB). While at early controls no significant difference in SF-36 was detected among the groups, at 12-month control QoL resulted as being significantly better for RYGB patients, particularly in pain (p:0.002), role limitation (p:0.005) and social activity (p:0.002) domains. Satisfaction for surgery was slightly higher for LAGB at early controls, significantly higher for RYGB at 12 months (p:0.004).

Conclusions: RYGB seems to produce, along with a higher weight loss and comorbidity resolution, a higher QoL increase, becoming more evident starting from 6 months postoperatively, and seemingly independent of weight loss.

P.152 BARIATRIC SURGEONS' PERCEPTIONS OF NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

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Background: NAFLD is a common cause of chronic liver disease. Morbid obesity is commonly associated with NAFLD which adversely impacts on health. Simple fatty liver disease (steatosis) is a benign condition, but. Steatohepatitis (NASH) is more aggressive

and seen in 10% of cases. NASH may lead to fibrosis, cirrhosis or hepatocellular cancer. Intra-operative liver biopsy is the only reliable way to evaluate the liver status. NAFLD is seen in 85–95% of morbidly obese patients. The aim of the survey was to understand bariatric surgeons' perceptions of NAFLD.

Methods: A survey was emailed to all British Obesity and Metabolic Surgery Society (BOMSS) surgical members (186) in March 2015 and elicited 30 replies (16% response rate) within a two week period.

Results: All respondents were aware of NAFLD. 23 (92%) felt bariatric surgery improved NAFLD. 29 (96.7%) thought NASH may progress to cirrhosis. 27 (90%) felt bariatric patients were unaware of NAFLD but 21 (70%) did not routinely discuss NAFLD with them. Intraoperatively, 26 (88.6%) would not routinely take a biopsy, despite feeling blood investigations did not diagnose NAFLD. 16 (53.3%) felt liver biopsy complication rates were < 5%, 26 (89.6%) thought liver function tests did not adequately predict progression to cirrhosis.

Conclusions: There is an awareness of NAFLD in bariatric surgeons, who feel patients are not aware of the disease and the risk of progression. There is a consensus that blood investigations are an inadequate diagnostic tool for NAFLD, but there is a reluctance to perform intra-operative liver biopsy. This may lead to post-operative lack of surveillance for these liver diseases in bariatric patients. Further studies are needed to ascertain whether liver biopsies should become a standard bariatric procedure.

P.155 SLEEVE GASTRECTOMY WITH DUODENO-JEJUNAL BYPASS IS A SUITABLE PROCEDURE FOR JAPANESE OBESE DM PATIENTS

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Backgrounds: T2DM of Japanese patients become severe with a low BMI. In Japan, the sleeve gastrectomy (LSG) is the only approved procedure. Besides, due to high incidence of gastric cancer, they hesitate to perform the RYGB. The sleeve-bypass (LSG/DJB) is the modification of BPD/DS and allows exploring the remnant stomach in regular way.

Objective: The aim is to compare the anti-diabetic effect of LSG/DJB with LSG in Japanese patients.

Methods: Since October 2010, we have performed 21 surgeries. Of those, 15 cases were complicated with T2DM. We assessed anti-diabetic effect postoperatively.

Results: Average number of pre-op anti-diabetic medicine was 2.3 in LSG and 2.0 in LSG/DJB. Insulin injection was applied to 5 patients. HbA1C was 7.4% in LSG and 8.0% in LSG/DJB at baseline and decreased to 5.7% and 6.3% at 12 months. In meal tolerance test, The blood glucose level did not decrease at 6 months in LSG, while it tends to decrease in LSG/DJB. Besides, IRI level was not changed in LSG, while dramatically decreased in LSG/DJB. Serum GLP-1 level (pmol/L) increases at 6 months significantly in LSG/DJB but not in LSG (LSG/DJB: 5.05 to 7.97, LSG: 3.02 to 2.70).

Conclusion: Both LSG and LSG/DJB have good effect on T2DM. However, LSG/DJB would be more effective in terms of hyper insulinemia improvement and incretin secretion. Thus, we conclude that it is essential to have a bypass surgery as a surgical option.

P.160 EX-VIVO EVALUATION OF LEAK PRESSURE ALONG REINFORCED STAPLE-LINE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Recent meta-analysis found significant reduction in leak incidence when staple-line is reinforced with SeamGuard(Gore), or sutures. It's unclear how staple-line reinforcement reduces leak rate. This experimental study explores the link (if any) between remnant intra-gastric pressure(IG-p) and leakage in SeamGuard reinforced staple-lines

Methods: 15 females undergoing LSG under same surgeon(MA) were recruited consecutively. Median age was 32years(range:17-56), BMI 43.15Kg/m²(range:36.5-51.4), weight of 119Kg(range: 89–193). Stapling 5cm from pylorus tightly over 32Fr bougie with EchelonFlexPower(Ethicon Endo-surgery) stapler with 2green cartridges(4.1-mm) and 3gold(3.8-mm) reinforced with Seamguard. Staple-lines crossing was avoided and carefully checked in specimens. Remnant was retrieved within 2min., connected to pressure-recording system and filled with 1-liter saline/dye solution. IG-p was recorded continuously and, after target volume, additional pressure was progressively exerted to reach bursting pressure.

Endpoints recorded: 1)IG-p at 1-liter volume 2)pressure/site of first leak 3)pressure/site of additional leaks 4)bursting pressure.

Results: All 15 specimens were included. Median IG-p at 1-liter was 47mmHg(range:12–71);no correlations were found with age, BMI or weight.

All leaks occurred at staple-line junctions with the second/third resulting the commonest point. No leaks were observed at the top of staple-line. Median IG-p at first and second leak was 51.5mmHg (range:23-66) and 67.5mmHg(range:53-120) respectively. Staple-line bursting pressure was not reached

Conclusions: Ex-vivo model in gastric remnant is reproducible, reliable and consistent. Seamguard-reinforced staple-line leaks only at high pressure and bursting point was not reached. Staple-line junctions with different staple heights are the weakest points

P.162 COMPARISON OF OPEN VS. LAPAROSCOPIC CONVERSION OF VERTICAL BANDED GASTROPLASTY TO ROUX-EN-Y GASTRIC BYPASS

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Background: The vertical banded gastroplasty (VBG) has been abandoned as a result of long-term failures. These failures are preferable converted to Roux-en-Y gastric bypass. The aim of the present study was to compare open (RYGB) with laparoscopic (LRYGB) conversion.

Methods: Published data from our group (Schouten et al., 2007) RYGB (N=101) were compared with prospectively recorded LRYGB (N=56) data. Patients were divided into 3 groups based on the conversion indication that was: weight regain (group 1), excessive weight loss with BMI < 25 kg/m² (group 2) and severe eating difficulties (group 3).

Results: Group 1 existed of 74/101 RYGB vs. 17/56 LRYGB. Group 2: 14/101 vs. 8/56 and group 3: 13/101 vs. 31/56. In the LRYGB more patients fell into group 3 probably because the time between VBG and conversion was significant longer (p<0.001). Outcome in weight and BMI at the time of conversion and the last visit did not significantly differ between the open and laparoscopic groups. In contrast, operative time (median 215 vs. 145 min), days in hospital (median 8 vs. 3) and overall complications (55.4% vs. 28.6%) were all significant in favor of the laparoscopic group. Incisional hernias were strikingly less in favor of the LRYGB (17 vs. 2). Anastomotic stenosis occurred in 23 patients in the open vs. 1 in the LRYGB.

Conclusions: Due to significant advantages, respectively less operative time, less days in hospital and less complications laparoscopic conversion is preferred.

P.163 ACC1 AND FAS mRNA EXPRESSION IN VISCERAL STROMAL VASCULAR FRACTION AND MATURE ADIPOCYTES FROM MORBIDLY OBESE WOMEN

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Objective: The aim of the present study was to investigate if the alterations in the fatty acid metabolism in visceral adipose tissue from morbidly obese women are due to the activity of mature adipocytes or the stromal vascular fraction.

Design and Methods: We compared the expression of key genes involved in the *de novo* synthesis of fatty acids, adipogenesis, and inflammation in mature adipocytes (MA) and stromal vascular fraction (SVF) from 20 samples of visceral adipose tissue in morbidly obese women (MO, BMI>40 Kg/m²) by RT-PCR.

Results: The mRNA expression of the main enzymes involved in the *de novo* synthesis of fatty acids was upregulated in MA (ACC1: MA=0.44±0.08, SVF=0.06±0.005, p=0.001; FAS: MA=3.37±0.87, SVF=0.05±0.01, p=0.002). Moreover, the expression of key genes related to adipogenesis was also significantly higher in MA than in SVF (PPARγ, MA=2.26±0.22, SVF=0.29±0.04, p=<0.001; Adiponectin, MA=0.46±0.06, SVF=0.08±0.02, p=<0.001). However, the proinflammatory gene IL6 was upregulated in SVF (SVF=7.09±1.65, MA=2.07±0.42, p=0.011), and TNFα showed no differences between both fractions (SVF=0.09±10.03, MA=0.02±0.01, p=0.066)

Conclusions: Our findings indicate that the downregulation of the *de novo* synthesis of fatty acids in the VAT depot of morbidly obese women are due to the direct activity of mature adipocytes. Furthermore, understanding the functions of mature adipocytes and stromal vascular fraction in fatty acid metabolism may help to understand the dysregulation of the fat balance that characterizes obesity and its associated metabolic disorders.

P.164
INTERLEUKIN-17A GENE EXPRESSION IN MORBIDLY OBESE WOMEN: RELATIONSHIP WITH INTERLEUKIN-6

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Objective: Recently, data from studies conducted in rodent models have indicated that interleukin 17A (IL-17A) may play a role in the induction of inflammation in adipose tissue during obesity. The aim of the study was to investigate the role of IL-17A in low-grade chronic inflammation due to obesity in human adipose tissue.

Methods: We used RT-PCR to evaluate the expression of IL-17A and interleukin 6 (IL-6) in the visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT) of 10 normal weight control women (BMI<25 kg/m²) and 30 morbidly obese women (MO, BMI>40 kg/m²). We also measured serum levels of IL-17A in MO and normal weight women.

Results: IL-17A expression was significantly higher in VAT than in SAT in MO patients (p=0.0127). It was very low in normal weight controls in both VAT and SAT tissues. We found a positive correlation between IL-17A and IL-6 expression in the VAT of MO patients (r=0.375, p=0.017). Regarding circulating levels, IL-17A was higher in the normal weight group than the MO patients (p=0.032).

Conclusion: IL-17A expression in visceral adipose tissue is increased in morbidly obese women, which proposes that there is a possible link between obesity and innate immunity in low-grade chronic inflammation in morbid obese women. Additional human studies are needed if these data are to be clarified.

P.165
QUALITY OF FOOD INTAKE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY, WITH OR WITHOUT ANTRUM RESECTION

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Background: The relationship between the quality of food intake and antrum preservation in laparoscopic sleeve gastrectomy (LSG) is still unknown. Our focus is to compare changes on intake and other metabolic parameters before and after LSG with or without antral preservation in morbidly obese patients.

Methods: prospective study with two randomized intervention groups according two distances in the initial section of LSG (3cm and 8cm from pylorus); 30 patients in each group. Food records of three days and metabolic parameters were collected and analysed before surgery and at 6 months.

Results: At the moment, 36 patients have been evaluated, 75.0 % ♀ and 25.0 % ♂, mean age 52.7 years, mean weight of 132.5 kg and mean BMI 50.5 kg/m². In both groups (3cm and 8cm) there is a significant reduction in the total daily intake (kcal/day). At six months it remains the similar percentage of macronutrients, showing the same imbalance in carbohydrates, proteins and fats. We observe a significant reduction in levels of insulin and HbA1c in both groups at six months after surgery.

Conclusions: Weight evolution at 6 months is similar for both groups. The data reported confirm that dietary intake of patients undergoing LSG six months after surgery does not change in terms of the quality of macronutrients. This implies the need to include nutritional education reinforcement in these patients after surgery. Both groups have good weight evolution and there is a clear trend towards normalization of metabolic parameters. The follow-up at one year will confirm these changes.

P.166
DER ZUGANG ZUM MAGEN NACH BARIATRISCHER ROUX-Y MAGENBYPASS-OP - INTERDISZIPLINÄRES GALLENWEGSMANAGEMENT BEI CHOLEDOCHO-LITHIASIS

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Einleitung/Hintergrund: Die endoskopische Gallenwegssanierung bei Choledocholithiasis mittels ERCP ist eine Domäne der Gastroenterologie und wird in hoher Frequenz in unserem Hause praktiziert. In einer Y-Roux-Situation ist der transösophageale-transgastrale Weg verwehrt und somit ist ein interdisziplinäres Konzept gefragt.

Patienten und Methode: Wir berichten über eine 55jährige Patientin, die sich 2 Jahre nach Roux-Y Gastric bypass Operation und einem Gewichtsverlust von 66 kg (initialer BMI 55,1 kg/m², aktuell 33,5 kg/m²) mit Oberbauchschmerzen in unserer Klinik vorstellte. Klinisch, laborchemisch, sonographisch und mittels MRCP diagnostizierten wir eine Choledocholithiasis und stellten die Indikation zur interdisziplinären ERCP. Zunächst erfolgte im Rahmen einer Laparoskopie eine Adhäsiole im Oberbauch. Der ausgeschaltete Magenteil wurde großkurvaturseitig mit einem Trokar transabdominell eröffnet. Nun wurde die Seitblickoptik vom Gastroenterologen in den Magen eingebracht und eine ERCP mit Steinextraktion und Papillotomie vorgenommen. Nach erfolgreicher Beendigung der ERCP wurde der Trokar im Magen wieder entfernt und der Magenwanddefekt mittels Naht verschlossen. In gleicher Sitzung erfolgte die laparoskopische Entfernung der Gallenblase. Der postoperative Verlauf war unkompliziert.

Zusammenfassung: Die endoskopische Gallenwegssanierung nach vorausgegangener bariatrischer nach Roux-Y Gastric bypass Operation ist interdisziplinär möglich und nach laparoskopischer Schaffung eines Zugangsweges in den Magen technisch sicher durchführbar.

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USEFULNESS OF NEW INDICATORS OF WEIGHT LOSS AFTER BARIATRIC SURGERY

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Background: The variable percentage of excess of BMI lost (% EBML) not represent a really good indicator because it uses parameters based on an ideal weight of 25. Expected BMI (BMIE) represent a new indicator, adjusting the weight loss by surgical technique. We compare the actual BMI with expected BMI in our patients after surgery, according to the formulas of Baltasar et al.

Methods: Retrospective analysis of 444 patients (n = 266 Sleeve Gastrectomy-SG / n = 178 Roux-Y-Gastric Bypass-RYGB). The following indicators (12-24-36 months) are calculated: actual and expected weight, actual and expected BMI adjusted by technique, % EBML and % EBML adjusted by expected BMI.

Results: The maximum weight loss occurs at the first year after surgery in BMI <45kg / m², in both surgical groups. In BMI > 55kg / m², the maximum weight loss occurs at three years for SG, but at 2 years for RYGB, regaining weight after the third year. The expected BMI is closer to actual BMI in RYGB group. In SG group with higher BMI there is no correlation with BMI expected. The % of adjusted EBML is significantly higher than standard values in both surgical groups.

Conclusions: Expected BMI can be useful at clinical daily practice in order to provide more realistic patient expectations. This value seems to be more useful in subgroups with BMI <55 kg / m² and in RYGB, considering that in our hospital SG technique is performed as a first step of Duodenal Switch (with BMI higher).

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CORRELATION OF NON-ALCOHOLIC FATTY LIVER DISEASE AND FEATURES OF METABOLIC SYNDROME IN MORBIDLY OBESE PATIENTS IN THE PREOPERATIVE ASSESSMENT FOR BARIATRIC SURGERY

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Background: The aim of this study was to investigate the relationship between non-alcoholic fatty liver disease and features of morbidly obese patients during the preoperative assessment for bariatric surgery.

Methods: This clinical study involved ultrasonography and laboratory assessment of obese patients before bariatric surgery. NAFLD was assessed using the same sonography parameters for all patients. Based on the results, the patients were divided into groups with and without NAFLD. Comparisons between the two groups involved clinical and laboratory variables such as fasting blood glucose, insulin, HOMA-IR (Homeostasis model assessment - insulin resistance), glycated hemoglobin, total cholesterol and fractions, triglycerides, alanine aminotransferase, aspartate aminotransferase, gamma glutamyl transferase, C-reactive protein, albumin and ferritin. Patients who reported alcohol abuse (defined as the consumption of >14 drinks per week) or who had hepatitis were excluded. Statistical comparisons were done using the nonparametric Mann-Whitney U test and the chi-square test. A value of p<0.05 indicated significance.

Results: Eighty-two patients (74 women and 8 men) were studied, of whom 53 (64.6%) had NAFLD and 29 (35.4%) did not. The levels of glycated hemoglobin ($p = 0.05$) and LDL cholesterol ($p = 0.01$) were significantly altered in patients with NAFLD. However, weight, body mass index and excess weight did not differ significantly between the groups ($p = 0.835$, $p = 0.488$ and $p = 0.727$, respectively).

Conclusions: Altered LDL cholesterol and glycated hemoglobin levels were related to the presence of NAFLD in this series of patients.

P.172 THE CORRELATION BETWEEN OBESITY-RELATED DISEASES AND NON-ALCOHOLIC FATTY LIVER DISEASE: A CLINICAL TRIAL OF PREOPERATIVE ASSESSMENT BY TRANSIENT HEPATIC ELASTOGRAPHY

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Background: The non-alcoholic fatty liver disease (NAFLD) is a common and severe comorbidity with high prevalence in obese patients, but it's usually underestimated by ultrasonography. This clinical trial, therefore, sought to correlate the metabolic syndrome of morbid obesity and NAFLD through assessment by transient elastography (*Fibroscan* - Echosens, Paris, France).

Methods: This is a clinical trial with patients in preoperative for bariatric surgery. One week before surgery, we evaluated the diagnostic value of liver stiffness measurement using the *Fibroscan* device and the steatosis quantification with the Controlled Attenuation Parameter software (CAP).

Results: We evaluated 50 obese patients with reliable measurement. The mean of transient elastography measurement value was 7.56 ± 4.78 kPa (range 3 – 21.6 kPa), and the mean CAP 279.94 ± 45.69 dB/m (range 203 – 398 dB/m). Characteristics of patients were as follows: T2DM 42%, hypertension 28% and dyslipidemia 26%. Two patients (4%) had at least one parameter of the metabolic syndrome; 14 (28%) had two; 21 (42%) had three; 9 (18%) had four; and 4 (8%) had five. Patient with one parameter had a mean of CAP of 238 ± 9.89 dBm; two 268.5 ± 35.16 ; three 285.6 ± 58.32 ; four 294.7 ± 32.12 ; and five 277.2 ± 24.32 . The numbers of parameters of metabolic syndrome had influence in the CAPs value ($p < 0.001$). We also observed some linear correlation between some variables: CAP and HOMA IR ($r = 0.570$; $p < 0.001$); CAP and HbA1c ($r = 0.517$; $p = 0.01$). Besides the fatty liver index did not have any correlation with CAP neither stiffness measurement, we found some correlation with IMC ($r = 0.58$, $p < 0.001$); WC ($r = 0.600$; $p < 0.001$); and excess weight ($r = 0.583$; $p < 0.001$).

Conclusions: *FibroScan* can be a useful device to evaluate the NAFLD in obese patients. The metabolic syndrome showed to have a linear correlation with increase values of CAP and stiffness measurement.

P.175 SHOULD INFERTILITY IN OBESE WOMEN WITH POLYCYSTIC OVARIAN BE CONSIDERED AN INDICATION FOR BARIATRIC SURGERY?

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Background: Polycystic ovary syndrome (PCOS) is the most frequent cause of female infertility, with a prevalence of 6-10% in premenopausal women. Visceral obesity is a key pathophysiological mechanism behind PCOS, thus women suffering from this syndrome and infertility often seek bariatric surgery with the hope that they would be able to conceive post-operatively.

Methods: To review the current literature regarding the role of bariatric surgery in management of infertility associated with PCOS. Pubmed, Embase 1974 to 2015 March 20 and Medline and Medline Non-indexed items were searched and reference lists were scanned for relevant manuscripts.

Results: 68 manuscripts were identified of which 7 were relevant, containing quantitative data and were included in analysis. 18 of the papers, although relevant, had no quantitative data and thus were excluded. 43 manuscripts were not relevant. 4 prospective and 3 retrospective studies demonstrated that gastric banding, Roux-en-Y gastric bypass, sleeve gastrectomy and gastric vertical plication result in postoperative conception rates varying from 33% to 100%. Surgery was also associated with amelioration of menstrual irregularities and improvements in hormonal abnormalities and hirsutism associated with PCOS. These studies were predominately epidemiological with sample sizes ranging from 2 to 67 participants.

Conclusions: While bariatric surgery has been shown to conclusively improve life expectancy, quality of life and some co-morbidities like type 2 diabetes and obstructive sleep apnoea, further larger studies are required to identify whether it results in significant improvement in fertility of women with PCOS.

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LAPAROSCOPIC GASTRIC PPLICATION AND ITS IMPACT ON BODY COMPOSITION, LIPID AND GLUCOSE METABOLISM

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Background: The aim of the study is to judge impact of laparoscopic gastric plication (LGCP) on selected metabolic parameters and body composition.

Methods: There were 52 patients in the study (19 men), the follow up was 12 month. Weight, high, body mass index (BMI) were measured and body fat mass and muscle mass were examined by dual energy x-ray absorptiometry (DXA). The blood samples were obtained before the operation,3,6,12 month after the operation. Lipids, fasting glycaemia and total Ghrelin were measured.

Results: After 12 month weight loss was in average 31,8 kg($p < 0,001$) in men, 21,9 kg in women ($p < 0,001$). BMI decrease was 10,6 kg/m² ($p < 0,001$) in men ,8,6 kg/m² in women ($p < 0,001$). Fat mass loss was 20,4 kg ($p < 0,001$) in men , 16,3 kg u žen ($p < 0,01$). Excess weight loss (EWL) was 49,77 % in men and 52,64 % in women. Excess body mas loss (EBL) was 60,58% in men and 54,28 % in women. Significant decrease in glycaemia was observed in men (6,83 to 5,33 mmol/l) and women (5,65 mmol/l to 4,87 mmol/l), too. Significant decrease in glycated hemoglobin was found out, as well. Increased level of total Ghrelin was measured, but in both soubgroups was not significant after 12 month. In the lipid spectrum there were decrease of total cholesterol and increased HDL cholesterol.

Conslusions: In the study improvement of glycaemia and lipid spectrum was observed. Total Ghrelin level increased.

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POST BARIATRIC SURGERY HYPERAMMONEMIA....SURGEONS BEWARE!

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Background: Bariatric surgical procedures are becoming common. In the USA alone 1,13,000 operations are done annually. Anastomotic strictures, marginal ulcers, dumping syndrome and internal hernias are common complications following bariatric procedure. Hyperammonemia is a rare fatal complication of bariatric surgery. We present our experience of a patient with post operative hyperammonemia.

Case report: A 52 yrs old Indian female with BMI (47) underwent Roux-en-Y gastric pass for morbid obesity. Immediate post operative period was uneventful. Patient was discharged on 2nd POD. Four months later she presented with persistent vomiting, irritability and lethargy. She was treated conservatively with IV fluids and nutritional supplementation (Thiamine & calorie). Her condition further deteriorated and she developed altered sensorium. On evaluation she was found to have hypoglycemic episodes, raised serum insulin and ammonia levels. Genetic test for OTC (Ornithine Transcarbamyase) gene deficiency was negative. This is a gene whose deficiency is held responsible for congenital hyperammonemia. She expired in ICU on 5th day of admission inspite of intensive management.

Discussion: Hyperammonemia is a rare complication of bariatric procedures with only anecdotal case reports in literature. Underlying hepatic dysfunction, urea cycle defects, infection with urea-splitting organism, Reye's syndrome and rarely OTC deficiencies can lead to hyperammonemia. Bariatric procedures result in hyperinsulinemia and hypoglycemia, caused by mesidioblastosis. Insulin can further down regulate the expression of urea cycle enzymes by hepatocytes leading to OTC deficiency. Zinc deficiency also leads to OTC deficiency. Combination of both leads to hyperammonemic fatal encephalopathy. Mortality remains high, hence strong suspicion and prompt treatment is mandatory in patients following bariatric procedures presenting with acute onset lethargy and altered mental status. Management is supportive requiring critical monitoring, correction of metabolic derangements and treatment of underlying cause.

Conclusion: Hyperammonemia is an extremely rare complication following bariatric procedures. Preoperatively history of substance abuse or use of medications that interfere with urea cycle should be taken. Further evaluation with serum vitamin B12 levels should be done to rule out encephalopathy due to Vitamin B12 deficiency. Serum insulin levels, regular RBS and LFT monitoring is also required. Hence strong suspicion and prompt treatment is mandatory in patients following bariatric procedures presenting with acute onset lethargy and altered mental status to rule out hyperammonemia. Treatment is supportive and pre-operative correction of underlying deficiencies. In the absence of a specific marker or test-the challenge presented by hyperammonemia is daunting!

VITAMIN K DEFICIENCY AFTER BILIOPANCREATIC DIVERSION WITH OR WITHOUT DUODENAL SWITCH: NO NEED FOR ROUTINE VITAMIN K SUPPLEMENTATION

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Introduction: Reduced serum vitamin K levels are frequently observed after biliopancreatic diversion (BPD) and BPD with duodenal switch (BPD/DS). It is currently not known whether supplementation is required, nor what oral dose should be used to normalize serum levels.

Methods: Serum vitamin K levels, clotting times and vitamin K dependent coagulation factors were measured at baseline and at 4 days and 1, 4 and 52 weeks after the start of vitamin K supplementation in 10 patients who had developed severe vitamin K deficiency after BPD or BPD/DS. Vitamin K was supplemented in a dose of 5 mg/day for one week, followed by a maintenance dose of 5 mg once a week. Serum vitamin K was measured with an assay specific for vitamin K₁.

Results: At baseline, all patients had serum vitamin K₁ levels below the limit of detection, but none reported symptoms of easy bleeding. Minor prolongation of the prothrombin time (PT) and minimal decreases of some coagulation factor levels were observed in a minority of patients. During the first week of vitamin K loading median serum vitamin K₁ levels rose into the high normal range, whereas during maintenance dosing median vitamin K₁ levels settled in the low normal range.

Conclusion: Vitamin K₁ deficiency in patients with BPD or BPD/DS is not associated with bleeding or clinically relevant decreases in coagulation factor activity. We hypothesize that vitamin K₂ production in the large intestine is sufficient to maintain liver vitamin K stores at adequate levels.

P.192 TECHNOLOGY-BASED INTERVENTIONS IN THE TREATMENT OF OVERWEIGHT AND OBESITY: A SYSTEMATIC REVIEW

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Introduction: The prevalence of obesity increases worldwide. The use of technology-based interventions can be beneficial in weight loss interventions.

Objectives: This review aims to provide insight in the effectiveness of technology-based interventions on weight loss and quality of life for patients suffering overweight or obesity compared to standard care.

Methods: Data was searched from the earliest date of each database up to February 2015. Cochrane Collaboration's tool for assessing risk of bias was used for rating the methodological quality

Results: Twenty-six trials met inclusion criteria. Twelve studies showed significant effects on weight loss compared to controls. Most interventions used a web-based approach (42%). Interventions were screened for five technical key components: self-monitoring, counsellor feedback and communication, group support, use of a structured program and use of an individually tailored program. No significant results for quality of life were found. Outcomes on program adherence were reported in six studies. No significant results were found between weight loss and program adherence. However, interventions with a technological component did show higher adherence rates compared to control groups.

Conclusion: Evidence is lacking about the optimal use of technology in weight loss interventions. However, when the optimal combination of technological components is found, technology-based interventions can be a valid tool for weight loss. Furthermore, more outcomes on quality of life and information about the effect of technology-based intervention after bariatric surgery are needed.

P.202 THE INFLUENCE OF SELF-PERCEPTION ON WEIGHT LOSS IN BARIATRIC PATIENTS

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Background: Successful weight loss after laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is often defined as a percentage excess weight loss (%EWL) >50%. According to literature mean %EWL after LRYGB and Laparoscopic Sleeve Gastrectomy (LSG) is 60-70% and 40-50% for adjustable gastric banding (AGB).

Objective: Determine whether patients' preoperative estimate of maximal weight loss is correlated to eventual maximal %EWL outcome.

Methods: Preoperative patients were educated to calculate their expected %EWL and thus their expected eventual weight. After these instructions patients were asked to note their expected minimal weight after LRYGB.

Results: Between December 2010 and September 2012, 700 patients participated in this study. 73% was female, 71% underwent LRYGB, 5% AGB, 9% LSG and 16% a redo-LRYGB. The average weight and BMI preoperatively was 131 ± 21 kg and 45 ± 6 kg/m². 455 out of 700 (65%) patients noted a lower weight than was expected. In RYGB patients 64% thought to weigh less than expected. This was the case in 94% of the AGB and in 78% of the LSG patients.

Patients who underwent LRYGB and thought to weigh less than expected had higher %EWL than patients who estimated the correct weight ($p = 0.04$). Remarkably patients who underwent a LRYGB and expected a higher %EWL eventually reached a higher %EWL compared to patients with a preoperatively estimated low %EWL.

Conclusion: Despite extensive instruction on how to calculate eventual %EWL and eventual weight, the majority of bariatric patients estimated their weight loss too high. Possibly the eventual actual weight is affected.

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ROUX-EN-Y GASTRIC BYPASS ALTERS INTESTINAL GLUCOSE HANDLING

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Background: Diabetes resolves rapidly after Roux-en-Y gastric bypass (RYGB) independently of postoperative weight-loss. Glucose handling by the remodeled gut after surgery could be a key determinant for diabetes resolution.

Objectives: To evaluate in rats and humans how the remodeled intestine absorbs and consumes sugar after RYGB surgery.

Methods: Intestinal segments were collected from RYGB or sham obese rats to perform histological analyses and evaluate expression of sugar transporters. Glucose transport and consumption were assayed *ex vivo* using jejunal loops and Ussing chambers. Histological analyses and immunostaining were performed on formalin-fixed Roux limb sections obtained from RYGB patients or jejunum from obese individuals and intestinal glucose uptake was assayed by PET/CT scan imaging. Statistical analyses used Mann-Whitney tests.

Results: In rats and humans; the Roux limb was hyperplastic with increased number of Ki67-proliferating cells. This overgrowth was characterized by an overexpression of the sugar transporters Glut1, which is physiologically poorly expressed in mature jejunum. Luminal and serosal glucose uptake by the Roux limb was increased in rats (+150% and +400% respectively vs. sham, $P < 0.001$) suggesting an increased intestinal glucose consumption. This was confirmed by an increased glucose uptake by the Roux limb in RYGB patients.

Conclusions: RYGB surgery quickly induces an overgrowth of the Roux limb and increases dietary and blood glucose consumption by the intestine. The rearranged gut could thus enhance glucose disposal and contribute to diabetes resolution.

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SECONDARY BARIATRIC SURGERY: WHAT FOLLOWS? A SYSTEMATIC REVIEW OF PATIENT PATHWAYS

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Background: While knowledge on technical details and short-term complications of revisional procedures is evolving rapidly, there is little information on 1) what happens to bariatric patients after secondary operations; 2) what secondary procedures result in higher complications and re-revision rates; and 3) what is the revisional rate for secondary bariatric surgery.

Methods: PubMed and Cochrane databases were searched using relevant terms for secondary bariatric surgery for the period 2004–2014. Patient pathways were identified and summarised from original studies. Papers with follow-up duration >12 months and follow-up proportion >75% were assessed to extract data on tertiary and subsequent bariatric procedures, rates of complications, non-bariatric reoperations, and mortality.

Results: We identified 1591 papers of which 106 contained traceable pathways for 4734 secondary bariatric procedures. For 4734 secondary operations, 393 tertiary, 20 fourth and 1 fifth bariatric procedures were reported. For adjustable gastric banding (AGB),

rebanding resulted in higher re-revisional rates than conversions into other procedures (RR 2.7, 95%CI 2.3 – 3.2, $p < 0.0001$), while conversion of AGB to Roux-en-Y gastric bypass (RYGB) resulted in the highest number of short (10.7%) and long-term (22.0%) complications. We estimated 1.26 operations (including two-stage procedures) for every patient requiring a secondary procedure with 8.8% needing tertiary bariatric procedures.

Conclusions: Reoperations after secondary bariatric surgery are common and should be addressed in the evaluation of bariatric surgery. Risks of re-reoperations and complications should be considered when choosing a secondary bariatric procedure.

P.211 CLINICAL SIGNIFICANCE OF UPPER GASTROINTESTINAL ENDOSCOPY BEFORE LAPAROSCOPIC SLEEVE GASTRECTOMY IN A JAPANESE INSTITUTE

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Background: In Japan, gastric cancer has been frequent and is the second most frequent cause of cancer-related death. The mortality is still much higher than in Western countries. Obesity is an important risk factor for several digestive diseases, such as gastroesophageal reflux disease (GERD), hiatal hernia (HH), and Barrett's esophagus. These are diagnosed by symptoms and upper gastrointestinal endoscopy. However, the routine endoscopy before bariatric surgery remains controversial. We have performed upper gastrointestinal endoscopy before laparoscopic sleeve gastrectomy (LSG), and retrospectively analyzed the clinical significance.

Methods: From June 2006 to March 2015, we have performed LSG in 85 patients, and all patients were enrolled in this study. They were 54 females and 31 males with an average of 41 years old, and preoperative weight and BMI were 120kg and 45kg/m², respectively. We analyzed endoscopic findings, including GERD, HH, Barrett's esophagus, gastritis, gastric cancer and polyp, and so on.

Results: The preoperative endoscopy revealed normal findings in 28 patients (22%), GERD in 18 patients (21%, M:3, A:12, B:3), HH in 32 patients (38%), gastritis in 45 patients (57%), and gastric benign polyp in 10 patients (12%), respectively. Atrophic gastritis, which is considered as precancerous lesion were detected in 18 of the patients with gastritis (21%), but gastric cancer and Barrett's esophagus were not detected. Although the size of HH was less than 2cm in the most patients, a patient with more than 4cm HH was treated by concurrent crural repair at the time of operation. There were no patients except for one whose operative procedures and dates were influenced by the endoscopic findings.

Conclusions: A routine endoscopy could preoperatively detect GERD, HH and atrophic gastritis, and may be a necessary evaluation in Japanese obese patients.

P.213 SUBCLINICAL HYPOTHYROIDISM AND ITS RELATION TO OBESITY IN PATIENTS BEFORE AND AFTER A ROUX-EN-Y GASTRIC BYPASS

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Background: Subclinical hypothyroidism (SH), defined as a raised serum thyroid stimulating hormone (TSH) with a normal free thyroxine (FT4), is occasionally observed in morbidly obese patients. It is currently not known whether thyroid hormone treatment is indicated.

Objective: The aim of the present study was to assess changes in thyroid hormone levels in thyroxin naïve patients with SH in response to weight loss induced by Roux-en-Y Gastric Bypass (RYGB) surgery.

Methods: Serum levels of TSH and FT4 were determined at baseline in 503 consecutive patients scheduled for RYGB. In patients diagnosed with SH de novo, these measurements were repeated 12 months after RYGB.

Results: SH de novo was present in 61 out of 503 patients (12%). Preoperative mean serum TSH was 5.8±2.0 mU/L and FT4 15.4±2.1 pmol/L. TSH Levels ranged from 4.04–13.80 mU/L. BMI decreased from 47±8 kg/m² to 33±6 kg/m² ($p < 0.001$). This was associated with a decrease in TSH and FT4 to 2.8±1.3 mU/L ($p < 0.001$) and 13.9±2.3 pmol/L ($p < 0.001$). SH completely resolved in 53 (87%) of the de novo cases.

Conclusion: The prevalence of mild SH de novo is high in morbidly obese patients. After RYGB it resolves in approximately 90% of patients. This suggests that follow-up alone is sufficient in the majority of patients, and that preoperative treatment with thyroid

hormone is not indicated in antibody negative SH. The remaining 10% requires additional screening by an endocrinologist because of an autoimmune disease.

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CHANGES IN IRON ABSORPTION AFTER ROUX-EN-Y GASTRIC BYPASS

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Background: After laparoscopic Roux-en-Y Gastric Bypass (LRYGB) the development of nutritional deficiencies is a severe problem. Iron deficiency is one of the most common postoperative deficiencies, despite daily supplementation. The most common oral treatment for iron deficiencies contain either ferrous fumarate or ferrous gluconate.

Objective: To gain better insight in the physiology of iron absorption after LRYGB, this prospective pilot study was performed.

Method: Twenty-four female LRYGB candidates with normal iron values preoperatively were included. An iron absorption test was performed preoperative and 1 month postoperative. Patients were divided into two groups; 12 patients received a single dose of 600 mg ferrous fumarate (65 mg elementary iron) and the other 12 patients received a single dose of 1390 mg ferrous gluconate (80 mg elementary iron). Iron, ferritin, transferrin, iron saturation and total iron binding capacity (TIBC) were measured before and every hour until 9 hours.

Results: Currently the results are under evaluation and will be available end may 2015. So far results show that there are no differences in uptake between ferrous fumarate and ferrous gluconate. Iron uptake is grossly reduced after RYGB.

Conclusions: Will be presented on the IFSO World Congress 2015. When using oral supplementation, looking at elementary iron, outcomes are not influenced based on what type of iron is used.

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IMPACTS ON QUALITY OF LIFE AND GASTROINTESTINAL DISTURBANCE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY IN ASIAN POPULATION

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Background: Laparoscopic sleeve gastrectomy (LSG) is effective as a stand-alone procedure for morbidly obese patients. However, gastrointestinal symptoms after LSG are common after LSG. This study is designed to evaluate the impact on gastrointestinal disturbance and quality of life (QoL) after LSG.

Method: This is a prospective study of patients who underwent LSG for morbid obesity as standalone procedure. Gastrointestinal disturbance was quantified with the use of Gastrointestinal Quality of Life Index (GIQLI). All participants completed the GIQLI questionnaire before and after operation at 1 year and 3 year.

Results: From 2006 to 2013, 98 patients, 36 male, with mean age of 37.6 +/- 10.4 years and mean pre-operative BMI 41.4 +/- 5.7 kg/m² were evaluated. Mean post-operative BMI was 31.5 +/- 5.6 and 32.8 +/- 5.6 in 1 year and 3 years after operation. After LSG, Patients had higher GIQLI scores after operation (114.6 verse 107.0, p<0.001, n = 67, 1 year after operation; 110.1 verse 103.3, p = 0.042, n = 42, 3 years after operation). Post-LSG GIQLI scores were significantly improved in Emotional, Physical and social domains. There is no statistically significant difference in core symptom scores.

Conclusion: Apart from promising bariatric outcomes, LSG may improve quality of life as evidenced by a higher GIQLI score 1 year and 3 years after LSG. The improvement is mainly accounted by better emotional, social and physical well-being.

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REDUCED STAPLE CARTRIDGE WASTE IN SLEEVE GASTRECTOMY POSSIBLE WITH OBSERVATION

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Background: Sleeve gastrectomy currently requires multiple staple cartridges to perform. Staple cartridges (SC) can be wasted by crossing, thereby resecting portions of staple line, or firing portions of staple cartridges without tissue. The purpose of this study was to determine the number of wasted staple cartridges (WSC) during sleeve gastrectomy procedures.

Methods: This is an observational study of consecutive patients. Two surgeons tracked SC use. We begin our staple line 6cm from the pylorus using a 40Fr bougie. Staple line length was measured in pathology. Ideal SC number (ISC) was calculated by dividing the measured staple line by the length of the staple cartridge (6cm), rounding down to the nearest integer, and adding one. $WSC = SC - ISC$. All comparisons were made using Student's t test.

Results: 160 cases were included in the analysis (87 retrospective, 73 prospective). Stomach length ranged from 15cm to 30cm. The average number of WSC per case was 2.7 ± 1.5 in the retrospective group and 1.3 ± 0.7 in the prospective group ($p < 0.001$). There was no difference between the first half and second half of the retrospective group ($p = 0.44$), ruling out a learning curve.

Conclusions: Sleeve pouches have different lengths. Indexing the number of cartridges to the staple line length allows for the calculation of WSC. The act of measuring helped surgeons save an average 1.4 WSC per case, a reduction of 51%. Surprisingly, staple cartridge efficiency can be improved just by having surgeons count staple cartridges.

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CHOLECYSTO – COLIC FISTULA

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Background: The cholecystocolonic fistula is a rare variant of gall stone complications. When symptomatic disease, surgical treatment with cholecystectomy, fistula takedown and possible colonic resection are indicated prior to gastric bypass to aid ERCP if needed post op. Herein we present a case of an incidentally discovered cholecystocolonic fistula in an obese surgical patient with symptoms of gallstone disease, managed with laparoscopic cholecystectomy and simple closure of fistula without colon resection. The presentation and treatment options for this disease are discussed in relation to their application to this patient.

Methods: A lady aged 56 presented to the bariatric clinic for pre assessment to schedule a gastric bypass surgery and at the time mentioned of ongoing right upper quadrant abdominal pain. No past surgical history, obesity is the only comorbidity present. On physical exam, right upper quadrant abdominal tenderness on deep palpation noted. Blood investigations revealed isolated raise in GGT. An ultrasound scan of the abdomen confirmed the presence of gall stones in a thin walled gallbladder with dilated CBD. A subsequent MRCP was requested but abandoned when patient failed to tolerate the scanner. Based on the ultrasound report patient was booked for a laparoscopic cholecystectomy with intraoperative cholangiogram.

She was take up as an elective day case laparoscopic cholecystectomy surgery with gastric bypass to follow at a later date.

Findings at laparoscopy however were not as described on ultrasound. We noted dense omental adhesions in right upper quadrant (figure 1). On taking down the adhesions the transverse colon was noted to overlay the GB with a fistula to the fundus (figure 2). Fistula was taken down from the gall bladder fundus. CBD was noted to be dilated. IOP not performed. Retrograde cholestyostomy done. Colonic fistula edge freshened (figure 3). No contamination occurred. Fistulous opening of colon closed with vicryl continuous suturing (figure 4). Drain placed after confirming hemostasis.

Results: Post-operative liver function test were noted to be normal

Drain removed 48 hours post operation patient discharge on 4th post operative day.

Conclusions: It would be advisable to get a CT scan in bariatric patients with symptoms of biliary colic with dilated CBD than just ultrasound findings, to be better prepared for complex findings.

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BARIATRIC SURGERY IN THE ELDERLY: SAFETY AND EFFECTIVENESS AFTER 3 YEARS OF FOLLOW-UP

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Introduction: Currently, bariatric surgery (BS) is the most effective treatment against obesity. BS indications are increasing and in the elderly has not been extensively described. The aim of this study is to describe our experience in performing BS in people over 60 years old.

Methods: Retrospective analysis of our BS database. Patients submitted to BS from 1995 to 2014, who were 60 years old or older, were followed. Age, demographics, anthropometrics, complications and pre-operative comorbidities were followed.

Results: 271 patients were identified, median age 63(60-77), 182(67.2) women. Median preoperative BMI 37.8(28.2-59.8). There were 38(14%) open RYGB, 141(52%) laparoscopic RYGB and 92(33.9%) LSG. Prevalence of comorbidities was: type-2 diabetes mellitus

31%, insulin resistance 24%, hypertension 60.5% and dyslipidemia 47.2%. The %EWL after 6, 12 and 36 months was 65%, 72% and 64%, respectively. Diabetic patients showed a 58%, 25%, 16% and 0% remission, improvement, stability or worsening, respectively. Hypertension, 31% remitted, 49% improved, 17% remained stable and 2% worsened. Diabetes showed 43% remission, 47% improvement, 8% stability and 0% worsening; Insulin resistance showed 50% remission and 50% improvement. We had 5.2% early complications (hemoperitonuem 0.3%, adynamic ileus 0.3%) and 18.4% late complications (incisional hernia 3.3%, gastrojejunal stenosis 2.9%).

Conclusions: BS in the elderly seems a promising treatment against obesity since it achieves sustained weight loss over time and may help in controlling chronic diseases, reducing cardiovascular risks. Nevertheless, long-term follow-up is needed to determine impact in overall survival.

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MEDICATION SCREENING OF PATIENTS UNDERGOING ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background: Obesity has reached epidemic proportions. Bariatric surgery, including Roux-en-Y Gastric Bypass (RYGB) is the most effective method for sustained weight loss. However, altered disintegration, solubility and absorption of drugs after RYGB may result in therapeutic failure. The aim of medication screening was to anticipate possible pharmacotherapy-related issues.

Methods: Patients undergoing RYGB (October 2014 - March 2015) underwent medication screening by a clinical pharmacist prior to surgery. Possible pharmacotherapy-related issues (e.g. use of extended release preparations, intake of large pills, drugs to avoid after RYGB, medications with specific absorption sites) were identified. Recommendations were communicated electronically to the surgeon and general practitioner.

Results: 138 patients (mean age [range]:42.0 [18 – 71] years, M/F: 47/90) underwent medication screening. In total, 385 drugs were screened. Following recommendations were made: drug cessation (13.8%), therapy switch (19.7%), extra monitoring or crushing pills (32.3%). In general, for 62.6% of the drugs a specific recommendation was provided. The top 3 of drug classes taken by RYGB patients were proton pump inhibitors, lipid modifying agents and vitamins. Proposal to cessate anti-inflammatory drugs, diuretics and contraceptives was given in 100%, 85% and 62% respectively. Extra monitoring was recommended for thyroid hormones, antiepileptic therapy and iron supplements, e.g. agents with a high risk of therapy failure.

Conclusions: Although RYGB procedures are performed in a relatively young population, pharmacotherapy-related issues are highly prevalent and highlight the potential role for a clinical pharmacist in the multidisciplinary approach of these patients.

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USING WHITE LINEAR CUTTER RELOADS IN LAPAROSCOPIC SLEEVE GASTRECTOMY – AN IN-VITRO FEASIBILITY STUDY AND INITIAL CLINICAL OUTCOMES

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Introduction: The preferred stapling method in laparoscopic sleeve gastrectomy (LSG) has been to use thicker types of reloads, although tighter reloads generate better hemostasis.

Objectives: To report a laboratory experiment and pilot clinical outcomes assessing the use of Echelon 60 (Ethicon Endosurgery) white reloads (WRs), in LSG.

Methods: In-vitro sleeves were made from 5 fresh LSG specimens using WRs. The WRs' holding strength was examined by filling the in-vitro sleeves with saline to supra-physiologic intra-luminal pressure. A preliminary report of 22 consecutive patients who underwent LSG using WRs on the fundus is presented.

Results: The in-vitro sleeves included 16 WRs, all aligned correctly, on mean wall thickness of 2.68 mm ± 0.927 (range 1.50 to 4.53 mm). Most (87%) WRs did not leak even when exposed to pressure of 40 mmHg. Two WRs leaked at 30 and 36 mmHg. Surgery and post-operative period were unremarkable for the 22 patients (mean BMI 42.3 kg/m²) who underwent LSG with an average of 9.78 cm WR length per patient. On measured 14 specimens of this cohort, WRs were applied on mean wall thickness of 1.87 mm.

Conclusion: This pilot study suggests that using WRs on the fundus in LSG is clinically feasible and safe. In addition, WRs were found in-vitro to have excellent holding strength under supra-physiologic pressure on a large range of wall thicknesses. Additional studies are needed to assess clinical outcomes of WR application.

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THE DISTAL GASTRIC BYPASS (DGB) AS A SECOND-STEP PROCEDURE AFTER SLEEVE GASTRECTOMY (SG)

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The numbers of SG-procedures are rapidly increasing all over the world. The early postoperative results regarding weight loss and remission of metabolic complications are comparable to the results after proximal gastric bypass, however, the long-term results are still widely unknown.

A generally accepted indication for SG is super-(super-) obesity (BMI > 60), which is managed with a multi-step-surgical program in which SG is followed by a second-step bariatric procedure often followed by plastic reconstructive surgery.

Historically, the second-step procedure after SG is the Duodenal-Switch but this procedure is not widely performed and thus cannot be recommended as the second-step procedure of choice after SG.

A possible alternative is the conversion of SG to a Distal Bypass with an alimentary limb of 150cm and a common limb of 100cm. The technique of laparoscopic small bowel anastomosis is familiar to every bariatric surgeon performing LRYGB and, therefore, the rate of postoperative complications after the Distal Bypass should be fairly low.

This video demonstrates the laparoscopic conversion of SG to a Distal Bypass step by step to demonstrate the safety and errors of this procedure.

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REOPERATIONS AFTER GASTRIC BANDING: SAFETY AND OUTCOMES IN ONE TIME SLEEVE GASTRECTOMY CONVERSION

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Background: We investigated the long-term complications after Laparoscopic gastric banding (LAGB). It is well known how slippage of the band or the pouch dilatation are related to the need of a second surgery or to the increased BMI. In our department we evaluated the safety and the outcomes after the conversion of LAGB in Laparoscopic Sleeve Gastrectomy (LSG) in a single procedure. The aim of our study is to analyze the intraoperative and the early complications, and to evaluate the BMI decreasing after the procedure.

Methods: Between 2005 and 2014 a total number 558 underwent LAGB for obesity. 73 (13%) of them (male 12, female 61) required a second treatment due to slippage of the Banding or for the pouch dilatation. The indication for the LSG was made after the refusal of the patients for the Laparoscopic Gastric By-pass. Results and follow-ups of the patients were analyzed.

Results: The indications for the surgery were slippage in 28 pts (38%), pouch dilatation in 33 (45%), other motivations as infection of the band, no tolerance or technical problems of the banding occurred in 12 (16%). Preoperative mean BMI was 43. Patients were complaining these comorbidities: diabetes (6%), Hypertension (26%), Metabolic syndrome (16%), Sleep Apnea (4%). There were no deaths following the reoperations. The major intraoperative complications were related to adhesions in 34 pts (46%), exposition of the gastric mucosa in 5 (7%) and bleeding in 2 pts (3%). Post-operative complications consisted in three (4%) cases of fever and staple line leaks treated with laparoscopic drainage and the confection of a jejunostomy. The mean Follow-up was 30 months, the mean BMI after the second procedure was 38 (P=0.05).

Conclusions: In Our experience LSG after LAGB is feasible, allowing a further decrease of the BMI in the follow-up together with the improvement of the obesity related comorbidities. Technical points of the operation and the support of specific device to reinforce the suture line (Seamguard Gore®) and to achieve a better hemostasis may help in reducing the intraoperative and early postoperative complications.

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THREE PORTS SLEEVE GASTRECTOMY. A COMPARATIVE STUDY

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Background: We think that parietal impact, by reducing size and number of ports could have a positive effect on postoperative recovery.

Methods: We have studied retrospectively patients chosen for a first sleeve gastrectomy. During the first period of 2014 the choice of size and number of ports was free. In a second time we have used a video laparoscope of 5 mm of diameter. We have done the procedure with 3 ports (two 5 mm and one 12 mm). When necessary a fourth port was used. The evaluation of size of ports was made by adding diameter of each port. Operating time, morbidity and length of stay were analyzed.

Results: Forty eight patients were operated (7 men).The average age was 42, 5 years (25-64). The average BMI was 42 (35-53).) There were 20 patients in the first group (G1). The cumulative size of ports was at maximum 44mm .The second group was composed by 27 patients .The cumulative size of ports was between 22 and 27 mm(It was necessary 16 times to use a fourth port). The average time for procedure was 77mn in G1 and 71mn in G2 (p<0, 21). There was one fistula in each group. There was no other complication or death. The length of stay was 5,25 days in G1 and 4,65 days in G2 (p<0,03).

Conclusion: It is possible to do a SG with 3 ports and low parietal impact. Length of stay is reduced.

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GASTRIC MUCOSAL DEVITALIZATION

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Background

Methods

Results

Conclusions

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REVISIONAL BARIATRIC SURGERY FOR INADEQUATE WEIGHT LOSS

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When behavioral or anatomic issues are not present, revisional surgery should be approached with a goal of treating malnutrition or enhancing excess weight loss. Unfortunately, no randomized controlled trials currently exist to help the practicing bariatric surgeon choose which revisional procedure to perform. A review of the available literature was undertaken and compared with our standard practices to see if any guidelines could be devised. At our institution, patients who have failed jejunal-ileal bypass are reversed in the setting of malnutrition and converted to a sleeve gastrectomy (SG) followed by duodenal switch (DS) as a second stage procedure in the setting of inadequate weight loss. After failed vertical banded gastroplasty (VBG), patients are converted to a Roux-en-Y gastric bypass (RYGBP). After failed adjustable gastric band (AGB) placement, we perform RYGBP. In the super-obese, we leave the band in place or convert to a DS with band removal. In patients with failed RYGBP, we convert our patients to DS, but placement of an AGB may be an acceptable option.

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POST-OPERATIVE IRON STATUS IN A LARGE COHORT OF BARIATRIC SURGERY PATIENTS

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Background: Iron deficiency is a well-recognized complication following bariatric surgery. Recent evidence suggests that iron deficiency and extreme obesity may have similar molecular mechanisms and may be inter-related. The purpose of this study was to systematically assess nutritional iron status in a large cohort of bariatric surgery patients.

Methods: Patients with BMI $\geq 35\text{kg/m}^2$ who underwent either Roux-en-Y Gastric Bypass or Sleeve Gastrectomy between 2004–2013 were studied. Laboratory parameters analyzed included Hemoglobin (Hgb) and Ferritin (F) levels and were reviewed in relation to patient demographics, comorbid disease burden and long-term outcomes.

Results: Of the 3207 patients, 2660 had satisfactory Hgb and F tests and 547 were excluded:

Preoperative Analysis: Normal iron status: 1653 patients (62.1%). Abnormal iron status: 598 patients (Iron deficiency: 66 (2.5%); iron depletion: 34 (1.3%); partially treated deficiency: 498 (18.7%)). 409 (15.4%) had no evidence of deficiency but an elevated F.

Postoperative Analysis: 1653 patients with normal pre-operative iron status were studied. 1183 (72%) had sufficient laboratory studies for analysis. Mean length of follow up was 3.6 years. The percent of patients with iron deficiency analyzed by postoperative time was: 6 months: 20%; 1 year: 32%; 3 years: 59%; 5 years: 76%. Females, age <50 were 1.39 times, and males age >50 were 1.83 times more likely to have evidence of iron deficiency ($p=0.0003$ and $p=$, $p=0.0006$ respectively). Preoperative BMI was not associated with post op iron deficiency. ($p=.0307$).

Conclusions: Abnormal iron nutrition is common in bariatric surgery and the risk increases with postoperative duration.

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LEAK, MISFIRED, BLEEDING; WHAT ABOUT STAPLER STUCK? CASE REPORT

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Background: Laparoscopic sleeve gastrectomy (LSG), the frequency of application has been rapidly increasing due to the advantages of bariatric surgery techniques.

Methods: 19 years old male patient BMI: 53,39 kg/m². Standard sleeve gastrectomy surgery was performed by our technique. Gastric resection began to be made with the help of Ethicon ECHELON FLEX™ ENDOPATH® (Route 22 West Somerville, NJ US) staplers. The second firing of the gun stucked and he was seen stapler could not be opened. The rear portion of the staple gun to keep the solution was gradually removed carefully with the help of a Kocher clamp. Stapler cutting and sealing process was opened by performing smoothly. Operation was terminated without any problem. The patient was discharged on postoperative day 3 in the standard way.

Results: Rare in the literature we have seen in our case, is defined with two third as we define the complication of laparoscopic stapling gun stuck situation. We describe our methods, standards and results of operations in the scheme have led to the completion of the transaction, without any changes.

Conclusions: Biomedical technological advances provide us great advantages in the surgical field, but as a surgeon uses hand tools to dominate the mechanical parts will be easier to get rid of the problems that can happen.

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BAND-PRESERVING MINI GASTRIC BYPASS

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Background: Revisional surgery for weight regain after gastric banding includes many options, one of them is preserving the band and performing a mini gastric bypass.

Methods: We report the clinical case of a 47-year-old woman who underwent a laparoscopic gastric band insertion for obesity in 2012. Her preoperative BMI was 35 kg/m². Her main related comorbidities included hypertension and dyslipidemia. She managed to lose weight initially but regained the weight later. The patient seeked further surgery but wanted her band preserved.

Results: She underwent a mini gastric bypass preserving the previous band in place. The band was defilled preoperatively. The vertical pouch was fashioned lateral to the band. A standard mini gastric bypass was performed afterwards with 200 cm afferent limb. The patient tolerated the procedure well and was discharged home in the second postoperative date without any complications. She did not have any particular morbidity during the first month after her operation.

Conclusions: A mini gastric bypass is a good option for revisional surgery for a gastric band especially if the band is kept in place. It is a feasible option and avoids an anastomosis close to the band. It may also reduce the risk of bile reflux symptoms related to mini gastric bypass.

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THE SHORT-TERM RESULTS OF ROUX-EN-Y GASTRIC BYPASS AFTER FAILED ADJUSTABLE GASTRIC BANDING OR SLEEVE GASTRECTOMY

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Background: Roux-en-Y gastric bypass (RYGB) is still considered the gold standard in bariatric surgery. Before, adjustable gastric banding (AGB) was regarded as an alternative, nowadays, sleeve gastrectomy (SG) is a more favorable alternative. In case of unsatisfactory results, RYGB is often performed as revisional procedure. Revision of an AGB is associated with a high risk at complications, the hypothesis is that this will be less after conversion of an SG.

Methods: All patients undergoing revisional RYGB after failed primary AGB or SG between 2005 and 2012 were included for retrospective analysis. Patient characteristics, operative details, postoperative complications, the relief of complaints, weight loss and evolution of known comorbidities up to two years were analyzed.

Results: A total of 178 patients were included (79.8% female), of which 110 (61.8%) had a failed AGB. Main reasons for revision were dysphagia/reflux complaints (39.9%) or weight regain/insufficient weight loss (48.4%). Postoperative surgical complications were found in 19 patients (AGB 13 vs SG 6; $p = 0.530$). Infectious complications occurred in 13 patients (AGB 11 vs SG 2; $p = 0.135$). Percentage total body weight loss was equal between groups after two years (AGB $31.6 \pm 11.0\%$ vs SG $31.6 \pm 12.0\%$; $p = 0.998$). The same result was found in a subgroup analysis on patients undergoing revision for additional weight loss (AGB $31.7 \pm 11.7\%$ vs SG $27.0 \pm 13.1\%$; $p = 0.173$).

Conclusions: RYGB as revisional procedure after failed AGB or SG shows comparable short-term results in terms of postoperative complications and weight loss.

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A SPECIFICALLY DESIGNED STENT FOR ANASTOMOTIC LEAKS AFTER BARIATRIC SURGERY: EXPERIENCES IN A TERTIARY REFERRAL HOSPITAL

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Background: Management of anastomotic leakage after either laparoscopic Roux-en-Y Gastric Bypass (LGBP) or laparoscopic Sleeve Gastrectomy (LSG) remains a burden. Various options are available for the treatment of these leaks. A newer and less invasive option for the treatment of leaks is the use of endoluminal stents. The main drawback for this treatment is stent migration. The current study describes the outcome of a specifically designed stent for the treatment of anastomotic leaks after bariatric surgery.

Methods: For this retrospective observational study, medical charts of patients undergoing bariatric surgery between October 1, 2010 and July 1, 2013 were reviewed. All patients with anastomotic leakage, treated with the bariatric Hanarostent, were included.

Results: Twelve patients were included out of a total of 1702 bariatric patients in the described period. Seven had a leakage after LSG, five after LGBP. An average of 2.4 endoscopic procedures and 1.25 stents were used per patient. Successful treatment was seen in nine out of 12 patients (75%). Most common complication was dislocation or migration of the stent, occurring in eight patients (66.7%).

Conclusions: The ECBB Hanarostent[®], which was specifically designed for post bariatric leakages, shows equal but not favorable success rates in this small series compared to previous reports on other types of stenting techniques. Despite the stent design, the complication rate is not reduced and the main future goal should be to target the high stent migration rate.

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THE EFFECT OF PRESERVING THE NEUROVASCULAR BUNDLE OF THE LESSER OMENTUM IN PRIMARY ROUX-EN-Y GASTRIC BYPASS SURGERY

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Background: A gastric pouch in Roux-en-Y gastric bypass (RYGB) surgery can be created after transection of the perigastric neurovascular bundle or by preserving these structures. Some surgeons choose to transect the neurovascular bundle (NBT), containing branches of the vagus nerve, since this might be related to additional weight loss, others advocate preservation (NBP) to prevent postoperative complications. This study assessed the effect of both techniques after primary RYGB.

Methods: All patients undergoing primary RYGB between January 2010 and December 2013 were included. Patient demographics, operative details, all postoperative complications and weight loss after one year were retrospectively analyzed.

Results: A total of 773 consecutive patients were included (85.5% female). NBT was performed in 407 patients (52.7%), whereas NBP was performed in 366 patients. There were no missing data and 81.2% of patients completed the 1-year follow-up.

Postoperative complications were found in 66 patients (8.5%). A total of 49 patients (6.3%) either had an anastomotic leakage, postoperative bleeding or intra-abdominal abscess (NBT 8.8% vs NBP 3.6%, $p = 0.003$). Percentage total body weight loss (NBT $34.5 \pm 6.9\%$ vs NBP $33.4 \pm 6.9\%$; $p = 0.011$) differed significantly between groups.

Neurovascular bundle transection was identified as independent factor amongst others for occurrence of either leakage, bleeding or abscess development (OR 2.886; 95% CI [1.466 – 5.683]; $p = 0.002$).

Conclusions: This study shows that transection of the neurovascular bundle in RYGB increases complications. Furthermore, weight loss is not relevantly increased. Further research is necessitated to substantiate these findings.

P.283 PATIENT COMPLIANCE WITH FOLLOW-UP AFTER BARIATRIC SURGERY: CAUSES OF ATTRITION, WEIGHT LOSS AND VITAMIN SUPPLEMENTATION

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Background: Regular postoperative follow-up for bariatric patients is important to detect nutritional deficiencies and to optimize weight loss. Despite high reported rates of attrition from bariatric aftercare programs only a few studies have explored the reasons for non-attendance.

The aim of this study was to explore patient reported causes of attrition after surgery and to compare weight loss and adherence to vitamin-mineral-supplementation (VMS) between regular attendees and non-attendees.

Methods: The clinical records of 128 consecutive patients who underwent adjustable gastric banding ($n=49$) or gastric bypass ($n=79$) were analyzed. Twenty-eight patients who did not comply with follow-up after at least 12 months were invited to participate at a semistructured phone interview. 79% were traced.

Results: The most common reasons for noncompliance with follow-up visits were “I don't feel the need to attend follow-up visits” (59%), “lack of time” (37%), “work problems” (27%) and “long distance to the medical center” (21%). The %EWL was greater among attendees than in non-attendees (mean %EWL 64,4% vs. 46,3%, $p<0.05$). Adherence to VMS was lower in the drop-out group (46,7% vs. 28,1%, $p=0.22$).

Conclusions: %EWL and adherence to VMS were higher among attendees, while, surprisingly, the most common cause of attrition was not linked to practical problems, but the individual perception of not needing follow-up visits. Further studies are required to develop strategies to improve the compliance with the post-bariatric aftercare program.

P.286 BARIATRIC SURGERY: A SINGAPORE INSTITUTION'S EXPERIENCE

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Background: Obesity is the 4th most prevalent disease burden among adults in Singapore. The rising trend of bariatric surgeries is also observed in Singapore.

Methods: The study is a retrospective review of patients who underwent bariatric surgeries from November 2008 to December 2013 in Tan Tock Seng Hospital, Singapore's second largest acute care general hospital with over 1,500 beds.

Results: 152 patients who underwent SG, sleeve gastrectomy ($n=90$, 59.2%) and RYGB, Roux-en-Y gastric bypass surgeries ($n= 62$, 40.8) were included in the study. 50% ($n=45$) were female in SG and 64.5% ($n=40$) in RYGB. Pre-operative BMI was 43.13 ± 8.23 in SG and 40.63 ± 6.31 in RYGB ($p=0.046$). Mean age of the patients was 39.9 ± 11.89 in SG versus 48.73 ± 8.69 in RYGB ($p<0.001$). 30% ($n=27$) has diabetes in SG and 83.9% ($n=52$) in RYGB ($p<0.001$). The leakage was observed in 3.3% ($n=3$) in SG and 3.2% ($n=2$) in RYGB ($p=1$). There was no 30 days mortality in both groups. The mean operative time of SG was shorter than RYGB group: $144.61(42.57)$ vs $207.43(58.88)$ ($p<0.001$). The mean percent excess BMI loss at 1 year was 73.6 ± 38.35 in SG compared to 70.30% (29.34) in RYGB ($p=0.608$).

Conclusions: Our study shows comparable results to those reported in the literature. In our cohort, the mean percent excess BMI loss were comparable between SG and RYGB group at 3 months, 6 months and 12 months post surgeries. Long term follow up is needed to confirm our findings.

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SUPER-OBESE PATIENTS- WHAT STRATEGY? - A CLINICAL CASE

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Introduction: In bariatric surgery, patients with extreme obesity, so-called *super-obese*, represent a formidable challenge for the surgeon.

Objectives: We describe the clinical case of a 23 year old female with a BMI 70 kg/m² that the obesity treatment option was the step by step approach, preoperative weight loss with the use of an intragastric balloon, followed by laparoscopic sleeve gastrectomy and Laparoscopic Roux-en-Y gastric bypass

Results: A 23 year-old-female, no medical history, was admitted with super morbid obesity with BMI = 70 kg/m². She underwent Endoscopic gastric intragastric balloon (GIB) in 2008. One year after GIB procedure, her weight decreased to BMI = 61 kg/m² has been proposed to perform Laparoscopic vertical sleeve gastrectomy. In 2015 she had a BMI 53 was proposed to Laparoscopic Roux-en-Y gastric bypass. She was discharged on the 4th post-operative day without any complaint. At the postoperative 2nd month, her BMI was recorded as 42 kg/m²

Conclusion: Preoperative weight loss with the use of an intragastric balloon has been proposed as an effective way to reduce the surgical risk in super-obese patients. Surgical treatment of obesity includes many types of operations. Laparoscopic vertical sleeve gastrectomy may initially be used as a first stage of surgery in patients at high risk or super obese patients. In a second phase, in patients who maintain a high BMI can carry out a laparoscopic Roux-en-Y gastric bypass or duodenal switch with laparoscopic biliopancreatic diversion. This phased approach is designed to reduce operational risk, improving comorbidities and reducing the technical challenges associated with patients with morbid obesity.

P.294
VARIABILITY IN PRE-OPERATIVE BARIATRIC PATHWAY: NEED FOR CONSENSUS?

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Background: Bariatric surgery with its inherent complex patient population would benefit from a uniform pre-operative pathway leading to better treatment outcomes.

Methods: A nationwide questionnaire survey was sent through the BOMSS (British Obesity and Metabolic Surgery Society) website with a view to ascertain prevalent practice in pre operative workup of patients in major bariatric centres in the UK

Results: 30/45 centres responded to the survey. Majority of the centres performed 100-300 procedures a year. All had a structured pathway and most of the centres held MDT meetings on a weekly basis. The surgeon, endocrinologist, dietitian, specialist nurse and the anaesthetist formed the core members of the MDT in majority of the centres. Sleep studies was done routinely for all patients only in 5 centres with the rest using a screening tool (STOP BANG or Epworth score) for evaluation of sleep apnoea. Half the centres routinely screened patients for vitamin deficiency and majority of the centres did not wait for normalizing the vitamin levels before surgery, though replacement therapy was initiated. Only six centres did routine OGD prior to surgery.

Conclusions: There is wide variation in pre operative work up of patients undergoing bariatric surgery in the UK. It is desirable that a consensus approach is adopted so that the best outcomes can be achieved. This in turn can inform an international working group which then can bring out best practice guidance that can be adopted on a larger scale.

P.297
COMPLIANCE OF OBESE PATIENTS WITH THE ‘EAT WELL PLATE’: AN AVENUE FOR POSSIBLE INTERVENTION?

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Background: The UK’s national food guide, the eat well plate, defines the government’s advice on a healthy balanced diet. The compliance of the obese patient population with the ‘eat well plate’ is not known

Methods: The dietary pattern of obese patients referred for bariatric surgery was investigated and compared to the recommendations of the eat well plate - a visual presentation of how different foods contribute towards a healthy balanced diet.

Results: A preliminary evaluation of 21 patients (M:F = 9:12) with a median age of 43 (range: 22-67) was done by dietitian in the out patient clinic. These patients had a median BMI of 50 (range: 35-71) and a body weight of 147 Kg (range: 88-250). As per the eat well plate, against the recommended proportion of 33% for food and vegetables, the median proportion among the obese patients was 19 % (range: 0-70). Likewise, the proportion for carbohydrate was 28 % (range: 0-55; recommended: 33), protein 20% (range: 10-35; recommended: 12), sugar/fat 21%(range: 0-50; recommended: 8) and dairy products 13%(range: 0-25; recommended: 15). Thus, this cohort of obese patients had an excess of sugar/fat component and a deficiency of fruit and vegetable in their diets.

Conclusions: Recognition of dietary pattern in obese patients and addressing the unhealthy traits in comparison to a validated dietary model with appropriate dietary advice and counseling will be beneficial to obese patients before subjecting them to bariatric surgery.

P.298

PREOPERATIVE AND POSTOPERATIVE NUTRITIONAL STATUS

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Obesity is epidemic, a very morbid condition that has several health consequences, it continues its popularity among bariatric surgery which rises for both severely obese adults and adolescents and very recently among children's. The recent studies indicate that many post-bariatric surgery patients have protein-calorie malnutrition and various vitamins and mineral deficiencies that may limit optimal health and healing; the dietitian's role here is a vital component.

The management of postoperative nutrition begins preoperatively with a thorough assessment of nutrient status, a strong educational program, and follow-up to reinforce important principals associated with long-term weight loss maintenance. The nutritional deficiencies like; Proteins, Vitamin C, A, glutamine, etc .can be maximized by adhering to eating guidelines, supplemental prescriptions and related physical activities significant beneficial effects on wound healing and optimizing the immune system.

The Medical Community can no longer ignore the vast body of EVIDENCE BASED MEDICINE RESEARCH (EBMR) that proves that Exercise and Sports Nutrition Prescriptions, and non-invasive Lifestyle Management and Age Management Protocols are the most effective treatments for the care and prevention for virtually all chronic diseases, disabilities and dysfunctions. The new era protocols that I am going to discuss during my talk will help quick relief for the post bariatric cycle into the doctors existing medical practice, regardless of the doctors specialty.

EBMR reported in "CIRCULATION" the Journal for Cardiologists that the number one predictor of the patients' chance of dying from a Cardiac Event had little to do with cholesterol, triglycerides, HDL, LDL, HDL-C or any other blood panel or medical test!

The chronic disease state typically progresses from becoming overweight, to obese, to Metabolic Syndrome, to Type 2 Diabetes resulting in the other various chronic disorders leading to premature death. Some new protocols enable doctors to reverse this progression! Bariatric Surgeons are likely to see patients presenting with multiple conditions that must be addressed before the most efficacious use of surgery. Some highlight objectives will be discussed about bariatric patients with diabetic issues their side effects and complications.

The efficiency of post- posterior of Bariatric surgery lies on the wellness team department, besides the pre posterior. I will focus the basic issues to be taken into consideration during posterior period with a few case studies from my patients. Some nutritional needed aspects between Bariatric operation (surgery) versus Metabolic operation (surgery). I will also discuss the recent new era of general view of nutritional deficits and Physical activities in obese and overweight individuals and those that commonly present before and mainly after bariatric surgery.

P.302

BAROS AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING WITH MIDBAND™

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Introduction: Laparoscopic adjustable gastric banding (LAGB) is a popular bariatric procedure in South Korea. However, analysis regarding the quality of life (QoL) after LAGB has never been reported in South Korea. The BAROS, giving a score to each operated patient on weight loss, improvement of medical condition, QoL, complications and re-operations, has proven to be a standard reference for evaluating bariatric surgery outcomes. This study prospectively aimed to investigate QoL and effectiveness of LAGB using the MIDBAND™

Methods: Between February 2013 and March 2014, 26 severely obese patients underwent primary LAGB with pars flaccid technique at our bariatric center. Patients were followed at 1 month interval for 1 year. In order to apply the BAROS, we received a questionnaire to 20 (95.2%) out of 21 patients who had > 1 year of follow-up from February 2014 to January 2015. Mean age was 33.3 years. Mean body weight and body mass index (BMI) were 108.7 kg and 39.5 kg/m².

Results: The percentage of excess BMI loss (%EBL) in the postoperative 3, 6, 9, and 12 months was 25.5 ± 9.9, 38.8 ± 13.6, 51.5 ± 19.6 and 59.5 ± 20.8%, respectively. Most of co-morbidities associated with obesity were disappeared. There were no 30-day peri-

operative mortality and major complications including bleeding and leakage. There were no 30-day mortality and major complications. However, 3 gastric pouch dilatation were detected during 12 months follow-up. One patient changed gastric band due to unbuckled MIDBAND™ at 10 months postoperatively. The Mean BAROS score was 6.1 ± 1.7 . According to BAROS, 1 (5.0%) patient were classified as fair, 4 (20%) patients were good, 8 (40%) patients were very good, and 7 (35%) patients were excellent.

Conclusion: The BAROS after LAGB with MIDBAND™ at short-term period is very surprising. However, the long-term prospective quality study is needed to determine the efficacy and safety of LAGB with MIDBAND™ for severely obese Korean patients.

P.306

INTESTINAL OBSTRUCTION BY MIGRATION OF INTRAGASTRIC BALLOON

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Background: The use of intragastric balloon (IGB) to treat obesity become popular because of their efficacy and safety. Deflation and migration of the balloon has been regarded as the most serious complication.

Objectives: To present a life threatening complication of IGB (four cases of digestive tract obstruction due to IGB migration) and methods of treatment.

Methods: Four patients 3 males and 1 female involved, their average age 30 and their weight 97-167Kg (average 119.5); their BMI 32.6-57.7Kg/m² (average 42.65) they had IGB procedure (filled with normal saline and methylene blue) to treat obesity diagnosed as upper small intestinal obstruction after (58,143,162,177 days).

Results: Endoscopy was used in three patients and IGB in the 1st part of duodenum identified and extracted, while in the 4th patient in whom the IGB passed to the ileum laparoscopy was used to localize the site of the balloon then enterotomy and extraction of IGB with primary closure performed.

Conclusion: IGB placement regarded as a safe method for weight loss, but deflation of these devices can happen and may cause a potentially life threatening complication (digestive tract obstruction) and physicians should be aware of them and close follow up with the alarm of urine discoloration (sensitivity around 60%) is mandatory.

P.307

THREE PORTS SLEEVE GASTRECTOMY. A COMPARATIVE STUDY

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Background: We think that parietal impact, by reducing size and number of ports could have a positive effect on postoperative recovery.

Methods: We have studied retrospectively patients chosen for a first sleeve gastrectomy. During the first period of 2014 the choice of size and number of ports was free. In a second time we have used a video laparoscope of 5 mm of diameter. We have done the procedure with 3 ports (two 5 mm and one 12 mm). When necessary a fourth port was used. The evaluation of size of ports was made by adding diameter of each port. Operating time, morbidity and length of stay were analyzed.

Results: Forty eight patients were operated (7 men). The average age was 42, 5 years (25-64). The average BMI was 42 (35-53). There were 20 patients in the first group (G1). The cumulative size of ports was at maximum 44mm. The second group was composed by 27 patients. The cumulative size of ports was between 22 and 27 mm (It was necessary 16 times to use a fourth port). The average time for procedure was 77mn in G1 and 71mn in G2 ($p < 0, 21$). There was one fistula in each group. There was no other complication or death. The length of stay was 5,25 days in G1 and 4,65 days in G2 ($p < 0,03$).

Conclusions: It is possible to do a SG with 3 ports and low parietal impact. Length of stay is reduced.

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CRIMINAL BARIATRIC PROCEDURE

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Introduction :One of the historical procedure was "Horizontal Gastroplasty "That was founded by Mason in 1970 as a restrictive procedure using staples dividing the stomach transversely toward the greater curvature leaving small orifice of communication between the two gastric channels.

Objective: To present one of many cases who underwent horizontal partitioning of the stomach by nylon thread in 2011 as bariatric procedure.

Methods: A 41 years old man presented with increasing weight of 60 Kg after bariatric procedure which was proved to be laparotomy and horizontal partitioning .His weight 195 Kg and his BMI 65.9 Kg/m² with comorbidities (Hypertension ,Joint problems, Dyslipidemia and respiratory problem).His preoperative endoscopy shows multiple rings (chain like) inside the stomach with epithelial growth over the nylon threads while contrast study shows no any restriction.

Results: Laparotomy performed and dense adhesions over the site of previous surgery identified and carefully released; then the nylon thread divided and removed till it's 1st knot in the lesser curvature followed by sleeve gastrectomy. The patient had uneventful post operative recovery and after 7 months he lose 71 Kg (58.6% of excess weight).

Conclusion: Believe it or not ,historical bariatric procedure still performed in 3rd world countries like Iraq by general surgeons and the best description for these procedures are (criminal procedures),most of these procedures will require revision soon or later; also public health education is necessary with vigilant commitment to the guidelines to prevent these unaccepted surgical errors.

P.311 EXCESS BODY WEIGHT LOSS AFTER GASTRIC BYPASS DOES NOT NECESSARILY PREDICT REMISSION OF DIABETES IN OBESE PATIENTS

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Background: Prediction of remission of diabetes after gastric bypass in morbid obesity is difficult and depends on a number of factors.

Methods: A retrospective review of diabetic morbidly obese patients who underwent gastric bypass was undertaken. Relationship between excess body weight loss (EBW) at one year and remission of diabetes (HbA1c <42mmol/l) was analysed. Statistical test using unpaired *t* test and Mann-Whitney *U* test was done where appropriate.

Results: 39 diabetic morbidly obese patients who underwent gastric bypass were followed up and trends in HbA1c and weight loss at one year was analysed. 24 patients (M:F=9:15; mean age: 48) had remission of diabetes at 1 year follow up as opposed to 15 patients (M:F=5:10; mean age: 52). Differences in mean BMI (50.1 vs 44.7; p=0.01), mean EBW (70.7 Kg vs 54.8 Kg; p=0.01) and mean HbA1c at presentation (67 mmol/l vs 46mmol/l; p=0.002) was statistically significant between the two groups. At one year follow up, there was no significant difference between the two groups in terms of mean EBW loss (67.6% vs 73.3%; p=0.36). However there was a statistically significant difference in mean HbA1c levels at one year follow up (38 mmol.l vs 52mmol/l; p=0.0001).

Conclusions: Excess body weight loss appears not to be a reliable predictor of diabetes remission in morbidly obese patients who undergo gastric bypass.

P.319 IS GASTRIC BYPASS SUPERIOR TO SLEEVE GASTRECTOMY IN ALTERATION OF LIPID PROFILE IN OBESE PATIENTS?

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Background: Patients undergoing bariatric surgery are known to have abnormal lipid profile detrimental to their cardiovascular wellbeing.

Methods: A retrospective study looking at lipid profile of patients undergoing bariatric surgery in the form of gastric bypass and sleeve gastrectomy was undertaken. Post operative levels at 6 months follow up were measured and difference between the two groups was analysed. Mann-Whitney *U* test and unpaired *t* test was used when appropriate.

Results: 70 patients underwent gastric bypass (mean BMI: 45.9; range: 34-59) and 22 patients underwent sleeve gastrectomy (mean BMI:48.3; range: 34-73) for morbid obesity. Median levels of HDL (1.1mmol/l vs 1.2 mmol/l), LDL (2.5 mmol/l vs 3.2mmol/l) and cholesterol (4.5 mmol/l vs 4.7 mmol/l) was comparable between the two groups. At 6 months follow up, the mean BMI was 35.8 (gastric bypass) and 38.9 (sleeve gastrectomy). Lipid profile was more favourable in patients who underwent gastric bypass when compared to those who underwent sleeve gastrectomy (LDL: 2.3 mmol/l vs 3.4 mmol/l; p=0.02; Cholesterol: 4 mmol/lvs 5.1mmol/l; p=0.001) except for HDL which was higher in patients who underwent sleeve gastrectomy (HDL: 1.2mmol/l vs 1.5mmol/l; p=0.03).

Conclusions: There appears to be a favourable change in lipid profile in patients who undergo gastric bypass when compared to sleeve gastrectomy though it remains to be seen whether this persists in the long term.

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CONVERSION OF LAPAROSCOPIC SLEEVE GASTRECTOMY TO LAPAROSCOPIC GASTRIC MINI BYPASS

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Background: Laparoscopic gastric mini bypass is relatively simple, short procedure and gaining in popularity for the treatment of morbid obesity.

Methods: We present the clinical case of a 39 year old woman who underwent a laparoscopic sleeve gastrectomy for morbid obesity in September 2012. Her preoperative BMI 48.6 kg/m² (weight 142 kg and height 1.71 m). She has diabetes mellitus type 2 and HbA1c was % 9.2. She presented as 108 kg and 38 kg/m² in March, 2013. The patient complained of gain weight (BMI 42 kg/m², 120kg) and her diabetes did not respond well to sleeve gastrectomy (HbA1c was % 7.8). Preoperative upper gastrointestinal series showed no dilation of sleeved stomach. Decision was made to convert Sleeve gastrectomy to gastric mini bypass in March 2014.

Results: The patient has uneventful period. She lost 18 kg in ten months (BMI 33.5 42 kg/m²) and HbA1c was %6.6.

Conclusion: A mini gastric bypass is a less invasive alternative to Roux N Y gastric bypass and it has a very effective metabolic affect; but produces similar results.

P.327

HOW TO DEAL WITH UNEXPECTED LIVER LESIONS IN LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: BETTER SAFE THAN SORRY?

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Background: Upon entering the abdomen of a 61-year old patient undergoing laparoscopic Roux-en-Y Gastric Bypass (RYGB) for morbid obesity (BMI 45kg/m²) a giant left liver hemangioma was encountered. Two main questions arise: how should we deal with unexpected liver findings and when is perioperative cancellation of surgery justifiable?

Methods: Review of literature (PubMed) was performed using a combination of following Mesh-terms (“Liver”, “Gastric Bypass”, “Incidental Findings”). 6 eligible articles were taken into account.

Results: When encountering a liver lesion the possibility of malignancy should obviously be considered. Especially in patients of older age (>55yrs) a low threshold for cancellation of bariatric surgery is advised. Immediate liver biopsy or intra-operative (laparoscopic) ultrasonography is a valuable option for it broadens the diagnostic landscape. Small benign lesions (cysts, hemangiomas or adenomas) should be left untouched if not interfering. Laparoscopic fenestration of a (non-infected) cyst can safely be performed. Malignant transformation of adenomas is described in literature. The possibility of rupture and fulminant bleeding of a giant hemangioma on liver retraction should be considered. One case of successful simultaneous left lobectomy and (open) RYGB is described. In our case cancellation and referral to a tertiary center for laparoscopic left liver lobectomy was favored. We did a laparoscopic RYGB afterwards but had to deal with extensive adhesions.

Conclusions: When in doubt a low threshold for cancellation of bariatric surgery is preferred, especially in patients of older age.

P.329

THE POTENTIAL ROLE OF BARIATRIC SURGERY IN THE TREATMENT OF OBESITY RELATED FEMALE INFERTILITY: OUR EXPERIENCE IN QATAR

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Introduction: The prevalence of obesity has increased dramatically in Qatar over the past 10 years. Obese women of reproductive age are a specific group at risk for obesity related reproductive and obstetric complications. There is a strong association between obesity and infertility, and weight loss can improve fertility in obese women.

Objectives: In this study, we share our experience in Hamad Medical Corporation, to show the role of bariatric surgery in improving pregnancy rates in infertile obese women (by natural approach or assisted reproductive technology).

Methods: This is a retrospective cohort study; where a chart review was performed on all morbidly obese females who underwent bariatric surgery between the years 2010 and 2013. Patients were followed up for one year post operatively.

Results: A total of 34 females were involved in the study, 2 patients were excluded because they were fertile or not sexually active. 32 infertile females were analyzed and 17 females became successfully pregnant at 12 months after the surgery (53% of the population). 12 of those patients did not need assisted reproductive techniques (70%); while 5 of them needed IVF (30%). The other 17 females did not conceive after surgery.

Conclusion: Obesity has adverse impacts on female fertility. Bariatric surgery plays a positive role by improving fertility. Further studies should be done to accept bariatric surgery as a treatment modality for obesity related infertility.

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PHYSICAL ACTIVITY AND BARIATRIC SURGERY – A REVIEW

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Background: Among the clinical interventions used to ensure success in the postoperative period in bariatric surgery, the guideline for regular exercise has been identified as an important strategy in the prevention and treatment of weight regained..

Methods: This is a systematic review, conducted in databases using the databases: Pubmed, Lilacs, SciELO, ISI, Escopus and Brazilian Journal of Sports Medicine. The descriptors used were obesity, bariatric surgery, bypass, and physical activity or exercise.

Results: Studies on the active behavior of patients after surgery showed better results and non-occurrence of weight regain compared to non-active groups.

Conclusions: There is a positive response reported in the literature associated with physical activity and post surgical intervention in bariatric patients, for the variables of cardiorespiratory fitness and body weight maintenance.

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THE IMPACT OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) ON AN NHS COHORT OF TYPE 2 DIABETICS: A PROSPECTIVE COHORT STUDY

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Background: Obesity is an independent risk factor for diabetes, which is associated with significant morbidity and premature death. This study aims to evaluate the impact of LAGB on a cohort of morbidly obese diabetic patients.

Methods: Inclusion and exclusion criteria were applied to consecutive diabetic patients undergoing LAGB. Demographic and disease specific data were collected at baseline and 6-monthly intervals corresponding to follow-up assessments. Minimum follow-up was 24 months. Normally distributed variables were assessed with one-way analysis of variance/ t-tests; correlations were analyzed with Pearson's test, and proportions with Chi-squared/ Fisher's exact tests.

Results: 120 patients with a median age of 43.3 years, mean (\pm SD) pre-op BMI of 48.7 (\pm 8) kg/m², and HbA1c of 8.6 (\pm 2) % were included. BMI reduced significantly, with annual post-operative means of 41.4 \pm 7.8, 39.9 \pm 7.7, 39.5 \pm 7.8, 39.3 \pm 7.1 and 36.6 \pm 5.4 kg/m² (p<0.001). Corresponding percentage excess body weight lost was 32.8 \pm 18, 39.8 \pm 21.4, 38.5 \pm 21.3, 37.0 \pm 22.3, and 43.1 \pm 14.1%. HbA1c was significantly lower at each time point until 30 months post-operatively (p<0.001). Thereafter differences were insignificant, and HbA1c was comparable to pre-operative levels by 5 years. 76(63%) patients achieved an HbA1c <7% at 30 months (p<0.001). 26(23%) patients achieved remission from diabetes. The cumulative 5-year cost saving from reductions in anti-diabetes medications was £1,650/patient. There were no mortalities, and 18 device explants.

Conclusions: Modest but durable weight loss associated with significant improvements in glycaemic control and anti-diabetic medication use have been demonstrated. Peak effects occur within 24-30 months and diminish thereafter, possibly reflecting progression of pathological processes due to residual obesity.

P.332
PREDICTIVE FACTORS OF POST-OPERATIVE HAEMOGLOBIN AND SERUM CALCIUM FOLLOWING ROUX-EN-Y GASTRIC BYPASS

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Background: Anaemia is a common finding following Roux-en-Y Gastric Bypass (RYGB) with an incidence up to 25%. Hypocalcaemia is less commonly reported. We sought to identify the prevalence and predictive factors for these deficiencies.

Methods: Data were collected on all RYGB performed at between 1st Jan 2011 and 31st March 2014. Haematological and metabolic variables were recorded pre-operatively and at one-year. All patients were prescribed multivitamin supplements post-operatively.

Results: RYGB were performed on 246 patients, 160(65%) female, mean age 47±10 years. Seven patients were lost to follow-up; mean length of follow-up was 13±3 months. Mean pre-operative Body Mass Index (BMI) was 49.5±7 and percentage Excess-Weight-Loss (%EWL) at one-year was 71±18%.

There was a significant drop in haemoglobin at one-year (141±14g/L v 136±14g/L, p<0.001). Only four (1.6%) patients were anaemic preoperatively; seventeen (7%) were anaemic at one-year. Age, gender, pre-operative BMI or %EWL did not predispose to post-operative anaemia. The only independent predictors were pre-operative haemoglobin (OR 1.08, 95%CI 1.03-1.13) and smoking history (OR 4.2, 1.04-16.9).

There was a significant drop in serum calcium at one-year (2.33±0.12mmol/L v 2.27±0.12mmol/L, p<0.001). Eleven patients were identified as hypocalcaemic pre-operatively and 38 post-operatively. Female gender was the only predictor of post-operative hypocalcaemia (OR 3.25, 1.34-7.81).

There was no statistical correlation between post-operative hypocalcaemia and either low Vitamin D levels or post-operative anaemia.

Conclusions: Overall anaemia was less prevalent in our population than previously reported. Hypocalcaemia was more prevalent, with the female population at higher risk.

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GASTROINTESTINAL BLEEDING OF THE JEJUNOJEJUNOSTOMY IN LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS, IS IT PREVENTABLE?

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Introduction: The postoperative gastrointestinal bleeding (GIB) of a Laparoscopic Roux en Y Gastric Bypass (LRYGBP) is a serious complication. There are many sites of potential bleeding, and one of them, the jejunojejunostomy, is not accessible to endoscopic management. We have achieved a reduction in the incidence of GIB through the suture reinforcement of the mechanical line of staples at the jejunojejunostomy.

Objectives: To compare the incidence of GIB in LRYGBP with and without reinforcement of the line of staples in the jejunojejunostomy.

Method: Retrospective study. Review of prospective database, 400 patients underwent LRYGBP, between January 2008 and December 2013. In the first group (n:138), it was not performed the reinforcement of the line of staples. In the second group (n: 262) there was a reinforcement of the entire length of the line of staples in the jejunojejunostomy, with continuous suture using poliglecaprone 3-0 (Monocryl, Ethicon). A technically comparable LRYGBP was performed in all patients. We compared the incidence of GIB among both groups.

Results: In the first group, the incidence of GIB was 5.8% (n:8), which was clinically manifested by hematoquezia, tachycardia, and drop in hematocrit. Only one patient required transfusion of red blood cells. In the second group, the incidence of GIB was zero. There was no mortality.

Conclusion: This series shows a benefit in the reinforcement of the line of staples at the jejunojejunostomy in the RYGBP, as it avoided the GIB.

P.340**METABOLIC EFFECT OF 70% SMALL BOWEL BYPASS IN POOR RESPONDERS TO GASTRIC BYPASS****Scott V. Monte**^{1,2}, Nicole Rossney², Misty Dennis², Joseph Mills³, Mark Cavaretta², Joseph A. Caruana, MD^{2,3}¹ State University of New York at Buffalo School of Pharmacy and Pharmaceutical Sciences, Buffalo, USA² Erie County Medical Center, Buffalo, USA³ State University of New York at Buffalo School of Medicine, Buffalo, USA

Background: An effective and safe threshold of 70% for revisional small bowel bypass (SBP) in patients with poor response to Roux-en-Y gastric bypass (RYGB) has been identified. This procedure augments secretion of hindgut hormones GLP-1 and PYY shown to promote weight loss (WL) and improve type 2 diabetes (T2DM). We present short to long-term data on metabolic effects of 70% SBP.

Methods: There were 25 patients eligible for 70% SBP; ie, <40% excess body weight loss (EBWL) from RYGB and inability to have >5% EBWL through nutrition and behavior modification over 6-months. With regard to %EBWL subjects were categorized as optimal (>20%), intermediate (10-20%), and non-responders (<10%). Six patients had T2DM at RYGB, with four unresolved and requiring treatment for T2DM at revision.

Results: Follow-up was from 6-36 months (1.5±0.9 years). 46% were optimal responders (31±7% EBWL), 38% intermediate (13±2%), and 16% non-responders (3±4%). 33% reached cumulative EBWL >50%. Within 3-months, 3/4 T2DM patients discontinued all oral medications and 2/2 discontinued insulin. HbA1C decreased in all four patients ranging from -0.4% to -4.2%. Average stools per day were 3.0±1.8. Occasional nocturnal diarrhea was present in 25%. No patients required reversal. There were no mortalities, serious morbidities or micronutrient deficiencies.

Conclusions: 70% SBP for poor WL response to RYGB induced significant WL, improved glucose metabolism, reduced oral antidiabetic medication requirements, and eliminated the need for insulin. These effects appear durable with 1.5 year average follow-up. Adding more restriction to failed RYGB is not necessary to achieve favorable results from revision.

P.341**LONG-TERM RESULTS OF LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS AS A PRIMARY PROCEDURE.****Jorge Saba**^{1,3,4}, Magdalena Bravo², Alejandro Escobar³, Macarena Torres³, Jorge Zajjur¹, Juan Muñoz¹¹ Dipreca Hospital² University of Chile³ Diego Portales University⁴ Indisa Clinic

Introduction: Laparoscopic Roux en Y Gastric bypass (LRYGB) has been established as a gold standard in bariatric surgery. Few studies have proven its long term effectiveness and follow up with an adequate number of patients.

Objectives: Our aim is to report the long-term outcomes of LRYGB in a high volume center.

Method: Retrospective analysis of patients submitted to LRYGB between the years 2007 and 2009, with at least 5 years of follow-up. Long term outcomes at 5 years were analyzed in terms of body mass index (BMI), excess weight loss (EWL), co-morbidities resolution and complications.

Results: A total of 68 patients who underwent a LRYGB were analyzed. Gender: 45 women (65,2%). Median age: 40 years (range 15-64). Median preoperative BMI: 39,4±4 kg/m² (range 32-54). A total of 33 patients (48,5%) completed 5 years of follow-up. At the fifth year, median BMI was 27,5±3,5 kg/m² and %EWL was 85,7±28. There were 2 patients (6.7%) with %EWL less than 50, but both remain with BMI less than 35 kg/m². Resolution of comorbidities: 23/24 insulin resistance, 19/22 dyslipidemia, 12/14 type 2 diabetes. Complications: 1 case (3,3%) of leakage of the gastrojejunostomy. There was no mortality in this series.

Conclusion: Our study shows an excellent result in the long term with the LRYGB as a primary surgery for severe and morbid obesity in terms of weight loss and safety. Despite the significant loss of tracking patients, this is a series with a good follow-up.

P.346**BONE HEALTH PARAMETERS OF THE OBESE IN SINGAPORE: RELATIONSHIP OF VITAMIN D DEFICIENCY TO BONE MINERAL DENSITY, PARATHYROID HORMONE AND BODY MASS INDEX****Anton Cheng**, Marc Ong, Chun Hai Tan

KTP Hospital

Introduction: Vitamin D insufficiency deficiency has been linked to low bone mineral density (BMD) and obesity in adults. This relationship is not well documented amongst obese patients of various ethnic groups in Singapore. This study examines the relationship between bone health parameters (serum vitamin D, intact PTH, BMD) and BMI in a group of obese individuals referred to the weight Management Program, as well as the morbidly obese referred for Bariatric Surgery.

Materials and Methods: 59 subjects referred to our hospital for surgical and nonsurgical weight management were examined. Their anthropometric data, BMD (lumbar spine (L1-L4) and neck femur), 25(OH)D, intact PTH, and other bone health parameters were measured according to detailed inclusion criteria. The subjects were stratified according to ethnicity, sex, BMI, percentage body fat, Vitamin D, calcium, and parathyroid hormone levels.

Results: Amongst the 59 subjects, vitamin D deficiency (25(OH)D<50 nmol/L) and insufficiency (≥ 50 -75 nmol/L) were 75% and 5% respectively. Calcium levels were normal in all subjects. Low serum Vitamin D levels were not found to have an inverse relationship with intact PTH and BMI, however there was a tendency towards an inverse relationship with percentage body fat. There was also no obvious difference between the three main ethnic groups. There was a positive correlation between BMD values at both lumbar spine (L1-L4) ($p < 0.05$) and neck femur ($p < 0.05$) and serum 25(OH)D levels, respectively.

Conclusion: This is the first attempt to collect bone health data amongst obese in Singapore. Significant Vitamin D deficiency exists within this cohort of racially mixed Singaporeans. The numbers collected is too small to reach any conclusion. It seems to affect BMD and bone turnover markers. There is a trend towards an inverse relationship between body fat percentage and serum Vitamin D; whereas the relationship between Vitamin D and BMI was more variable. The data suggest that an increase in PTH cannot be used as a marker for vitamin D deficiency. A larger study is being conducted

P.352 COMPARISON OF WEIGHT LOSS USING BOUGIE VERSUS ENDOSCOPE IN SLEEVE GASTRECTOMY – SINGLE TEAM EXPERIENCE

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Objective: Laparoscopic sleeve gastrectomy has become a viable option for treatment of morbid obesity. Sleeve is constructed by firing the stapler 3- 5 cm proximal to the pylorus. In most of the centers bariatric surgeons fire the stapler over a bougie ranging from 32 to 40 Fr gauge. Average weight loss reported in most of the series published is 50-55% of extra body weight.

Aim: To compare weight loss pattern between bougie (32 - 40 Fr) and endoscope (28 Fr) in sleeve Gastrectomy.

Methods: Study period – August 2007 – December 2014, Number of Patients – 629, Bougie used – 66 patients, Endoscopy done – 563 patients, Duration of Follow-up – 4 years, Male to Female Ratio – 0.66, Mean BMI – 44, Mean Age – 40 years

Result: As compare to 50-55% of weight loss in patient where sleeve gastrectomy was done using bougie, our series shows a weight loss of 65-78% on 4 year follow up when sleeve was made using 28 Fr endoscope without any adverse effect or increase leak rate as compared to bougie (32 - 40 Fr).

Conclusion: Creation of sleeve over upper GI endoscope (28 Fr) is safe and gives us opportunity to examine intra-luminal suture line. On 4 year follow up we have found that weight loss was significantly more in patients in which sleeve was made using 28 Fr endoscope without increase leak rate.

P.353 THE OBESITY PARADOX IN DIABETES PATIENTS: SUGGESTIONS FROM METABOLIC SURGERY RESEARCH

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Background: A meta-analysis had indicated that higher body mass index (BMI) is clinical predictor that can identify patients in whom type 2 diabetes amelioration is possible in metabolic surgery research with gastric cancer patients undergoing subtotal gastrectomy. However, mortality by BMI status among diabetes patients undergoing subtotal gastrectomy are still unknown.

Methods: We evaluated long-term survival data of gastric cancer patients who underwent subtotal gastrectomy between Jan1993 and Dec2012 and already had type 2 diabetes when diagnosed with gastric cancer. The charts of 2085 patients in the retrospective cohort in 2 university hospitals were reviewed. Among these, we finally enrolled 210 type 2 diabetes patients and mortality data for all-cause were

acquired from statistical office of Korean government. Survival was compared with the use of propensity scores and inverse probability weighting to adjust selection bias. Participants were classified as normal weight if their BMI was 18.5 to 24.99 or overweight/obese if BMI was 25 or greater.

Results: Mean BMI of normal weight group and overweight/obese group were 22.4 kg/m² (SD: 1.8 kg/m²) and 27.4 kg/m² (SD: 2.1 kg/m²) respectively. The median follow-up period was 6.1 years (interquartile range: 3.5 to 8.3 years; maximum 14.4 years). During follow-up, 53 patients (25.2%) died. For overall mortality, patients of overweight/obese group were at a significantly lower risk of death (HR: 0.51; 95% CI: 0.34 to 0.77; p = .001) compared with normal weight group. In subgroup analyses, while patients less than 5 years diabetes duration showed significant survival benefit in the overweight/obese group (HR: 0.36; 95% CI: 0.16 to 0.81; p = .01), there was no significant difference of survival period between normal weight and overweight/obese group in the patients of 5 years or more diabetes duration.

Conclusion: Type 2 diabetes patients who were overweight or obese at the time of subtotal gastrectomy for cancer had lower mortality than patients who were normal weight. And this effect was only observed in the group of patients under 5 years diabetes duration.

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LAPAROSCOPIC SLEEVE GASTRECTOMY: OUR FIRST 100 PATIENTS

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Background: Laparoscopic sleeve gastrectomy is becoming a popular procedure for the morbidly obese patient. Its utilization as a standalone procedure has good results with weight loss in short and midterm reports. The aim of this study was to assess our technique and whether it warranted any modifications in the early postoperative period.

Methods: Our first 100 consecutive patients undergoing laparoscopic sleeve gastrectomy were retrospectively reviewed. Data analysis was done at 3 and 6 months to assess the percentage of excess body weight loss and comorbidity status change.

Results: The percentage of excess body weight loss at the 3 and 6 month marks was 30.7% and 49.6% respectively. Co-morbidities were also improved at the 3 and 6 month marks. Hypertension resolved in 38%, dyslipidemia resolved 19%, and diabetes in 46%. Complications during the first 6 months was 5%. Major complications included 1 patient with postoperative bleeding, 1 patient with proximal leak.

Conclusion: Our technique is a safe method that is easily reproducible. Laparoscopic sleeve gastrectomy is an excellent surgical option with a low complication rate.

Key words: Co-morbidity, gastrectomy, gastric by-pass.

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CHANGES IN LIPID PROFILE POST LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG): OUR EXPERIENCE

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Introduction: Morbid obesity is gradually becoming a large health hazard worldwide. LSG has lamented itself as a primary weight loss surgery. LSG improves or resolves hyperlipidemia in most of the morbidly obese patients. Hyperlipidemia is a risk factor for development of coronary artery disease in morbidly obese patients. The most common abnormalities are hypercholesterolemia, hypertriglyceridemia, low HDL and high LDL cholesterol values.

Objectives: To evaluate effects of LSG on lipid profile (follow-up 6, 12 & 24 months).

Methods: Study period: 2011-2014; Total no. of patients (n) : 340; No. of hyperlipidemic patients: 147/340.; Lost to follow up: 48; Duration of follow-up : 4 years; Male to Female ratio: 0.64; Mean BMI: 44; Mean Age : 41 years

Results: A total of 147 patients were diagnosed with hyperlipidemia of whom 48 lost to follow-up. Data is presented on 99 patients (60% females), aged (25 to 50 yrs). Patients lost around 66.66% to 73 % of extra weight over a period of 4 years. Mean triglycerides decreased from 243 to 186 and 141 mg/dl, while HDL increased from 28 to 47 and 53.5 mg/dl at 6 & 12 months. TC/HDL and TG/HDL ratios also decreased significantly. There were no changes for total cholesterol and LDL levels.

Conclusion: LSG improves lipid profiles in morbidly obese patients with hyperlipidemia, with most patients not requiring lipid lowering drugs within 6 months after surgery.

P.356**CIRCULAR STAPLED GASTROJEJUNOSTOMY IN LRYGB- A RETROSPECTIVE ANALYSIS OF 1023 PATIENTS****Rajesh Khullar***Max Healthcare*

Introduction: Circular stapled anastomosis (CSA) during LRYGB is one of the most commonly used techniques for creation of gastrojejunostomy. We performed retrospective analysis of patients operated over 5 years to evaluate outcomes with the use of circular endostapler (EEA™25mm, Covidien, Dublin, Ireland) for Gastrojejunal anastomosis (GJA) in LRYGB.

Methods: Between February 2009 to March 2014, 1023 patients underwent LRYGB using circular stapled anastomosis (CSA) technique. The end points were haemorrhage, anastomotic leak, marginal ulcer and anastomotic stricture formation.

Results: The mean time taken for creation of gastric pouch and GJA using the circular stapler reduced to 44 min (2012 to 2014) from 62 min (2009-2012). Median follow up of the patients was 31 months (range 7 months- 61 months). The median excess weight loss (EWL) was 32.5 kg (range 12-55kg) at 1 year, 28.5kg (range 12-48 kg) at 3 years and 24kg (range 10.2-44kg) at 5 years. Postoperative complications occurred in 32/1023 patients (3.1%). Haemorrhage from GJA occurred postoperatively in 22 patients (2.1%). No patients required re-exploration for haemorrhage at GJA and were managed conservatively. One patient (0.09%) developed leak from the GJA site postoperatively for which he had laparoscopy and suture of the anastomotic leak. Four patients (0.39%) developed marginal ulcer at the GJA. Five patients (0.5%) developed wound infection. None of the patients developed stricture during postoperative follow up.

Conclusion: Use of CSA technique with 25mm circular endostapler confers several advantages in terms of less postoperative complications at GJA, satisfactory weight loss and a uniform stapled anastomosis.

P.357**COMMON CHANNEL LIMB MEASUREMENT IN MGB****Alaa Abbass Moustafa**, Reda Saad, Alaa EL Ashry, Medhat Helmy, Randa Reda Mabrouk*Faculty of Medicine Ain Shams University, Cairo, Egypt*

Background: Over the last few years MGB has gained acceptance among Bariatric Surgeons and patients though its mal absorptive consequences. Incidences of nutritional deficiencies more than the standard RYGBP have been reported. This in part may be due to the longer bypass limb in MGB.

Objectives: We aim to minimize the unnecessary nutritional deficiencies paying attention to the measurement of common channel limb of MGB.

Method: The study was conducted from January 2012 till July 2013 on three hundred morbidly obese Egyptian patients at Ain Shams University Hospitals, Cairo, Egypt. MGB with measurement of common channel limb to be sure that its length is not less than two thirds of total small bowel was performed. Follow up of patients for nutritional deficiencies and weight loss results were conducted every six months.

Results: The weight loss results, BMI, and percentage EWL were within in the same range of internationally reported MGB as well as the correction of the co-morbidities.

Nutritional deficiencies of Vitamin B1, Vitamin B12, iron, calcium, Zinc and albumin were significantly less than internationally reported studies.

Conclusion: In our Egyptian study the measurement of the common channel in MGB making sure that it is not less than two third of the total small bowel length, gave the same weight loss results. At the same time improves markedly the nutritional deficiencies following the procedure. Wider scale studies with longer follow up are recommended.

P.359**BLEEDING AFTER ONE ANASTOMOSIS GASTRIC BYPASS (MINI GASTRIC BYPASS)****Dr Shivaram HV***Columbia Asia Hospitals, Bangalore, India*

Background: Mini gastric bypass or One anastomosis gastric bypass is being increasingly performed all over the world for the management of morbid obesity. One of the complications is post operative bleeding. The bleeding can occur from the anastomotic line, gastric pouch or the remnant stomach.

Methods: 50 patients who underwent mini gastric bypass in our institution were analyzed. Two patients had bleeding post operatively from the gastrojejunal anastomotic site. They were managed conservatively. Both of them underwent a careful endoscopy to confirm the site of bleed and to inject adrenaline locally at the site of bleed. They needed ICU care and blood transfusions.

Results: Both patients recovered fully without any need for additional surgery. They are doing well postoperatively and weight loss and co-morbidity resolution is good.

Conclusion: The post- operative bleeding after mini gastric bypass from the anastomotic site can be managed conservatively with monitored care, endoscopic intervention and blood transfusions.

P.361 INTRAOPERATIVE MEASUREMENT OF SEROSAL MICROVASCULAR TISSUE OXYGENATION USING A VISIBLE LIGHT SPECTROSCOPY DEVICE (VLS) DURING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Laparoscopic sleeve gastrectomy (LSG) is a well-established bariatric procedure. Leakage remains the most feared complication. Ischemia has been discussed to predict leakage and is one of the most common risk factors. Intraoperative visual assessment of gastric perfusion during surgery has been found to be inefficient to predict leakage. However, reliable intraoperative assessment of intestinal microvascular tissue oxygenation is not yet established. This study evaluates gastric microperfusion and its alterations during resection using a Visible Light Spectroscopy (Spectros™ T-Stat 303) measuring serosal microvascular tissue oxygenation.

Methods: Patients undergoing LSG between January and December 2014 were included. First, reference measurements were performed at the lesser curvature (M1–M3), followed by measurements at the planned resection line (M4–6) and greater curvature (M7–M9). After mobilization, measurements were carried at the same areas again. After resection, measurements were conducted only at the lesser curvature (M1–M3) and resection line (M4–M6).

Results: Twenty patients were consecutively recruited, 3 male (15%) and 17 female (85%). Median age was 43 years, median preoperative BMI was 46.9 kg/m². The highest drop in serosal StO₂ values was observed at the upper parts of the resection line (M6) after mobilization from 60.2% to 60.0% and after resection to 50.7%.

Conclusions: Serosal microperfusion is liable to alterations during surgery with a decrease after gastric mobilization and resection compared to initial reference measurements. The measured oxygenation shows highest drop in the upper line next to the gastroesophageal junction.

P.365 LEAKS AFTER SLEEVE GASTRECTOMY: PRESENTATION AND TREATMENT MODALITIES

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Background: Sleeve Gastrectomy (SG) is the most frequent bariatric surgery technique realized in France, and effective on short-term weight loss and comorbidities. Leaks post-SG is a serious complication; its treatment is often long and difficult. The purpose of this study was to report the incidence of fistula in a specialized bariatric center and the characteristics of presentation of these fistulas and list the different modalities of management of this complication.

Methods: This is a retrospective study with prospectively collected data, between January 2011 and December 2014, 583 SG carried out in a specialized bariatric center. All patients with post-SG leaks were included. The time and circumstances of the occurrence of fistulas were collected. All therapeutic procedures for the management of these patients were reviewed and described.

Results: Out of 583 SG operated during these 4 years, 35 patients (6%) (86% women, mean age 35.6 years, mean BMI 45 kg/m²) with post-SG leaks were included retrospectively. The time of onset of the fistula was on average 9.5 postoperative days (2-83 days). The most common symptom was abdominal pain (97%) followed by fever (66%), and tachycardia (57%). The final diagnosis was confirmed by a CT scan with oral contrast in 85% of cases. Fourteen patients (40%) required surgical treatment, 5 of which also received endoscopic treatment (4 covered stent and 1 naso-fistulous drain) and one patient developed a gastro-bronchial fistula which required a total gastrectomy. Seven patients (20%) benefited from a purely endoscopic treatment consisting in placing a covered stent in 4 patients and in naso-fistulous drain in 3 cases. Finally, 14 patients have had conservative treatment with antibiotics and parenteral nutrition. The mean duration of hospitalization after the onset of the leak was 30 days (11-97 days). No deaths were reported in our series.

Conclusions: Our series confirms the incidence of post-SG leak already reported in the literature (6%). The analysis of the different treatment modalities in our series shows that conservative treatment and/or endoscopic possible. Surgical treatment was done in case of severe sepsis. A prospective follow-up study would confirm this data.

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PROPER PORT PLACEMENT LOCATION TO REDUCE PORT SIDE EFFECT AND COMPLICATION

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Background: Poor cosmesis and irritating pain with the visible protruding port are also complained following sufficient weight loss. This study is to look for the tolerance of port placement locations.

Methods: Data were recorded prospectively by patients who undertook LAGB for 5 years. The subfascial port was constructed between rectus muscle and posterior rectal aponeurosis through an umbilical port incision (SUB group). The suprafascial port placement was made in anterior rectal aponeurosis (SUP group).

Results: We registered 790 of the SUB group and 42 of the SUP group. The operation time was 79.6 minutes in the SUB and 91.3 minutes in the SUP ($p < 0.001$). The length of stay was 262.4 minutes in the SUB and 289.7 minutes in the SUP ($p < 0.001$). Additional analgesics was more frequently used in the SUP (23.7% vs. 40.5%, $p < 0.05$). 23.8% patients of the SUP were complained pain of the port site compared to 2% of the SUB. Six patients (16.7%) of the SUP group undertook a port revision due to cosmetic needs ($n=3$), skin maceration ($n=2$) and tube migration ($n=1$) following sufficient weight loss. One flip was developed in the SB group that was spontaneously normalization. Each one port leak in both groups was occurred due to incorrect needling into the root of port-a cath.

Conclusions: The subfascial port placement is superior in reduced operation time and postoperative pain, short length of stay, fewer complication, and better cosmesis. The weakness of this placement is to need a real time radiography for the filling because of non-palpable port even if sufficient weight loss.

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HISTOPATHOLOGICAL FINDINGS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction: The sleeve gastrectomy has experienced a significant increase in recent years. Initially it was thought as a first time duodenal switch in superobese patients in order to decrease complications. At present time it is used as a primary procedure in many patients.

Objetives: We asked for the histopathology results of the pieces of resected stomach and its correlation with endoscopic biopsy specimens diagnosis.

Methods: Retrospective study of biopsies from patients with sleeve gastrectomy. 150 consecutive patients operated from 2009-2014 in our hospital who underwent sleeve gastrectomy.

Results: Mean age of 44.3 years. 64.3% Women; Mean BMI of 52.2 kg / m²; Chronic Gastritis 50%; Follicular Gastritis 3.6%; Gastric polyps 0.61%; Intestinal metaplasia 2.44%; Helicobacter pylori was not detected because they had been treated preoperatively. The findings are similar to those obtained in the preoperative upper endoscopy performed on all patients.

Conclusion: Half of the patients have chronic gastritis. No mention of the size of the piece so it can not be taken as a prognostic factor. No Helicobacter pylori in the pieces studied by the success of eradication therapy. Resected stomach biopsy may not be necessary given the findings previously known in endoscopy.

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EVALUATION OF SOME LIPID METABOLISM PARAMETERS IN OBESE SUBJECTS FOR DEVELOPING TARGETED NUTRITIONAL STRATEGIES.

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Obesity is characterised by profound changes in fatty acid metabolism mainly as responses of insulin and leptin resistances and excess adipose depot. Whether these changes are the cause of a general metabolic impairment or just a consequence is still debated. It is emerging however, that normalising fatty acid metabolism improve several metabolic parameters.

In this observational study we recruited 42 Obese subjects age 25-64, 37 female, 25 male and 50 normal weight individuals matched for age, 44 female, 20 male.

We evaluated the profiles of plasma and red blood cells fatty acids, leptin, the endocannabinoids 2-arachidonoylglycerol (2-AG) and anandamide (AEA) and its congeners palmitoylethanolamide (PEA) and oleoylethanolamide (OEA).

We found a significant increase of AEA and 2-AG and PEA, which were associated to a significant increase of saturated fatty acids (SAFA) both in plasma and red blood cells. The increase of SAFA was correlated to higher plasma levels of palmitoleic acid a marker of an enhanced de novo lipogenesis triggered by insulin resistance. As expected, in obese subjects leptin concentration tripled with respect to normal weight individuals.

Most of these parameters, and particularly endocannabinoids and congeners, may be reverted by nutritional strategies by tailor-made formulation of dietary fatty acids. Future studies will aim at evaluating whether changes in these parameters by a nutritional approach may lead to significant clinical improvements of the metabolic derangements characteristic of obesity.

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LARGEST SINGLE SURGEON SERIES OF TOTALLY ROBOTIC ROUX-EN-Y GASTRIC BYPASS (TR-RYGB)

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Background: Several studies find that the robotic surgery system reduces complications, particularly those associated with anastomoses. In this study, we present our findings on the risks and outcomes of TR-RYGB of a large single surgeon practice series.

Methods: The population included 1,234 patients, average age=49.4y, BMI=48.5 and Female/Male distribution=72%/28%. A relatively large percentage (40%) of patients were superobese (BMI≥50) and elderly (25.1%, ≥60y). Outcomes included: operative time, intraoperative complications/conversions, length of hospital stay (LOS), in-hospital complications/reoperations, 30-day readmissions, 30-day mortality, and total % changes in BMI (6, 12, 24, 36 months).

Results: The data show exceptionally low rates of intraoperative complications (1 misfired staple, 2 staple errors, 1 bleed) for a rate=0.32%, 2 conversions (1 bleed, 1 due to anatomy) for a rate=0.16% Total operative times averaged 123.7±27.2(SD) minutes; mean LOS was 2.26 days and in-hospital complication and reoperation rates were 2.43% and 2.19%, respectively. The 30-day readmission rates averaged 5.83%, with malaise (benign pain, nausea/vomiting, constipation/diarrhea, dehydration) responsible for the majority (64%) of cases. Out of the 1,234 TR-RYGB procedures, only one anastomotic leak occurred for a rate=0.08%. 30-day mortalities included 2 unexplained deaths and 1 from refused blood transfusion for a mortality rate=0.24%. As for weight loss, total % BMI change (34%) peaked at 12 months and remained relatively unchanged, thereafter.

Conclusions: TR-RYGB is safe and efficacious and results in exceptionally low rates of intraoperative complications and postoperative anastomotic leaks.

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TOTALLY ROBOTIC ROUX-EN-Y GASTRIC BYPASS (TR-RYGB) REDUCES SURGICAL RISKS FOR MALES

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Background: Large database analyses find that male gender is a predictor for increased morbidity and mortality with RYGB. Robotic-assisted and TR-RYGB may reduce surgical risks and, in particular, those associated with anastomotic leak. To our knowledge, this is the first study that has examined gender-specific surgery risks and outcomes with TR-RYGB.

Methods: The study population included 1,234 TR-RYGB patients: 892(72%) females and 342 (28%) males. Measurements were: operative time, intraoperative complications/conversions, length of hospital stay (LOS), In-stay complications/reoperations, 30-day readmissions/reoperations, 30-day mortality, and total % change in BMI (6, 12, 24, 36 months).

Results: Males presenting for surgery were significantly ($p<0.01$) older and had higher ASA scores than females. Total surgery time was significantly longer for the males vs. females (130 vs. 121 minutes, respectively) but there were no significant differences in LOS (2.27 vs. 2.25 days). Intraoperative complication rates were exceptionally low (0.16% males and 0.16% females), as were conversions (1 each). Rates for In-hospital complications/reoperations and for 30-day readmissions/reoperations did not significantly differ (chi sq

$p > 0.05$) between the sexes and, for all patients, only 1 anastomotic leak occurred (incidence=0.08%). 30-day mortality rates for males were 0% and, for females, 0.3%. There were no gender-related differences in weight loss (% change BMI) at 6, 12, 24, or 36 postoperative months.

Conclusions: The data suggests, that with TR-RYGB, male gender is not an increased risk factor for peri- or postoperative complications, including anastomotic leaks.

P.381 THE SAFETY OF REVISIONAL BARIATRIC SURGERY ACCORDING TO THE CLAVIEN-DINDO CLASSIFICATION

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Background: The only proven effective treatment for morbid obesity on the long term is bariatric surgery of which different procedures exists. As the long term results of the adjustable gastric band turn out to be disappointing, some patients opt for revisional surgery, mostly into laparoscopic Roux-en-Y gastric bypass (LRYGB) or laparoscopic Sleeve Gastrectomy (LSG). The purpose of this study was to assess the morbidity and therefore safety of these revisional procedures compared to primary surgery.

Methods: A consecutive database containing all patients who underwent either primary or revisional bariatric surgery was retrospectively reviewed. Complications were subsequently graded with the Clavien Dindo classification based on the required intervention.

Results: The study population consisted of 1624 patients, of which 295 (18.2%) underwent revisional surgery, mainly revision from gastric banding into LRYGB (87.8%). There were significant differences in BMI, obstructive sleep apnea, joint problems, hypertension and diabetes between both groups, all in favor of the revisional surgery group. Patients who underwent revisional surgery had higher risk on overall complications (24 vs 16%, $p=0.003$), severe short term complications (7.5 vs 3.5 %, $p=0.004$) and long term complications (12.7 vs 7.6 %, $p=0.012$). Mortality occurred in four patients (0.2%), all in the revisional surgery group (1.4%; $p<0.001$).

Conclusion: Revisional bariatric surgery has a higher risk on postoperative complications and therefore a risk factor for (severe) complications compared to primary surgery. Therefore, revisional surgery should be performed in specialized centers.

P.385 EARLY EXPERIENCE WITH MINI GASTRIC BY-PASS

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Background: Obesity is a pan-endemic health problem and the second leading cause, after tobacco, for preventable death. Many studies aimed to find an answer to this epidemic crisis have demonstrated the superiority of the bariatric surgeries over conservative oral medical therapy. Among the different bariatric surgeries, the mini-gastric bypass or omega bypass or one anastomosis bypass, procedure has gained popularity in recent years. It was originally described by Dr. Robert Rutledge in 1997 as an answer to traditional gastric bypass surgery, which results in excellent weight loss, but carries a 7% complication risk. The objective of the study was to present our experience with mini gastric bypass concerning the operative and post-operative results complications and outcome compared with sleeve gastrectomy.

Methods: We retrospectively reviewed the charts of all patients who underwent mini-gastric bypass from May 2013 till March 2015, Compared to sleeve gastrectomy in the same period of time. We evaluated the technique in two aspects: perioperative outcomes- operative time, length of hospitalization, post operative complication and the second was the technique's efficiency- weight loss, diabetes and hypertension control. The operative techniques are the one anastomosis of jejunal loop 150 – 200 cm length to the gastric pouch. The procedure was performed laparoscopically.

Results: Forty seven patients underwent mini-gastric bypass. From which, seven were men and forty one were women, with a mean age of 48.04 years. The mean BMI was 44.05. thirteen patients had a previous bariatric surgery that failed- two had sleeve gastrectomy and six had gastric banding and one had SRVG. 151 patients underwent Lap Sleeve Gastrectomy. The mean operative time was 123 minutes for mini bypass and 50 minutes for sleeve gastrectomy. The mean length of hospitalization was 4.5 days for bypass and 2 days for sleeve gastrectomy. Three patients had a postoperative complication- all were minor complications, one had leak from anastomosis. in the she past underwent SRVG. After sleeve gastrectomy it was 8% complication. Four of them minor complication of wound healing and atelectasis and four patients suffered from gastric leak. All patients demonstrated postoperative weight loss, cure of diabetes and hypertension.

Conclusions: According to our results, mini- gastric bypass is a safe alternative to the traditional RYGB or sleeve gastrectomy with less of major complication. It can also serve as a salvage procedure after failure of a previous bariatric procedure.

P.391
SPLANCHNIC VEIN THROMBOSIS – AN UNCOMMON COMPLICATION AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction: Laparoscopic sleeve gastrectomy (LSG) is an innovative and relatively safe surgical approach for weight reduction in morbidly obese people. Splanchnic vein thrombosis (SVT) is an extremely rare complication of LSG and, if it not recognized, carries a high mortality rate. This paper highlights a potentially lethal condition of SVT after LSG.

Case description: A 37-y-old morbidly obese woman presented to our institution to have a LSG performed. Three weeks later she was readmitted with abdominal pain, vomiting, nausea, diarrhea and fever. Abdominal X-ray as well as ultrasonography were both normal and no X-ray contrast medium leakage was observed. A week later she was readmitted with septic condition. Abdominal computed tomography scan diagnosed lineal vein thrombosis along its whole length and partial thrombosis of vena mesenterica superior.

Discussion: SVT presents very heterogeneously, which makes it extremely challenging to diagnose and treatment decisions. Along with high prevalence of obesity and increasing frequency of LSG as a surgical procedure, prompt diagnosis and management are crucial.

P.393
RESULTS OF IMPLEMENTING AN ENHANCED RECOVERY AFTER BARIATRIC SURGERY (ERABS) PROTOCOL

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Background: With the increasing prevalence of morbid obesity and healthcare costs in general, interest is shown in safe, efficient and cost-effective bariatric care. This study describes an Enhanced Recovery After Bariatric Surgery (ERABS) protocol and the results of implementing such protocol on procedural times, length of stay in hospital (LOS) and the number of complications, readmissions and reoperations.

Methods: Results of implementing an ERABS protocol were analyzed by comparing a cohort treated according to the ERABS protocol (2012-2014) with a cohort treated before implementing ERABS (2010-2012). Differences between both cohorts were analyzed using independent t-tests and chi-squared tests.

Results: A total of 1.967 patients (mean age 43.3 years, 80% female) underwent a primary bariatric procedure between 2010 and 2014, of which 1.313 procedures were performed after implementation of ERABS. A significant decrease of procedural times, such as mean length of stay in the operation room (84.6 to 72.8 minutes, $p < 0.05$), and a significantly decreased LOS, from 3.2 to 2.0 nights ($p < 0.001$) were seen after implementation of ERABS. Significantly more complications were seen post-ERABS (16.1% versus 20.7%, $p = 0.013$), although no differences were seen in the number of readmissions, reoperations and major complications.

Conclusions: Implementation of ERABS can result in shorter procedural times and a decreased LOS, which may lead to more efficient and cost-effective bariatric care. Even though the number of complications increased after implementation, this was mainly caused by an increase in minor complications, possibly due to better registration of complications.

P.394
NEW TECHNIQUE MAKES ROUTINE SINGLE INCISIONAL LAPAROSCOPIC SLEEVE GASTRECTOMY POSSIBLE: THE EXPERIENCE IN APPLICATION OF TRIPLE SITE SUSPENSION METHOD

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Introduction: Laparoscopic sleeve gastrectomy with single incision laparoscopic surgery method (SILS), or single incisional laparoscopic sleeve gastrectomy (SILSG), has ever been performed with technical challenges. We developed a new technique of “Triple Site Suspension (TSS)” to provide further exposure and make SILSG more feasible.

Objectives: Through calculating the conversion rate, operative time, complication rate and hospital stay to analyze the influence of TSS for SILSG. Furthermore, try to find the risk factors of conversion.

Method: There were 100 laparoscopic sleeve gastrectomies in Wan Fang Hospital between December 2012 and February 2015. Three incisions method was used for the first 11 patients and the SILSG was performed routinely since the 12th patient. TSS technique was applied since the 25th patient for better exposure. The same operative technique and perioperative protocol were implemented for all patients.

Results: There were 89 SILSGs-first operations in our series. For the first 13 operations, the conversion rate was 38.5%. Under the application of TSS technique, the conversion rate dropped to 5.3%. The major complication rate decreased from 7.7% to 5.3%. There was no significant difference in operative time, hospital stay and therapy effects of obesity and related diseases. For those patients with higher BMI levels and taller body heights, operative procedures were more difficult.

Conclusion: Although SILSG is still difficult to be carried out, the TSS technique might help us to make SILSG safer and more feasible. The possible risk factors of conversion from SILS to multiple ports method included patient’s BMI and body height.

P.395

COMPARISON OF INTRAGASTRIC BALLOON AND GASTRIC PPLICATION

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Background: There are many surgical and interventional methods for dealing with obesity. Intra-gastric balloon (IB) is interventional and nonsurgical way of promoting weight loss in obese patients. Laparoscopic gastric plication (LGP) is most physiologic surgical method of bariatric surgery. Both are restrictive methods dealing with obesity. In this study, we aimed to compare the efficiency of intra-gastric balloon application and laparoscopic gastric plication in terms of %excessive weight loss and BMI change.

Methods: Ninety-five obese patients (34 male and 61 female) included in this study. Data on patient demography, change in body mass index (BMI) and %excess weight loss (%EWL) of 1st and 6th months were collected.

Results: The study had started with 69 patients for IB group, but 17 patients were excluded from the study. There were 52 patients left in IB group and 43 patients in plication group. There were no statistically difference between IB and plication groups in terms of age ($p=0.132$), sex ($p=0.262$) and BMI ($p=0.081$). Change in total body weight (TBW), BMI and %excessive weight loss (EWL) parameters were statistically significant in favor of the plication group.

Conclusions: Our clinical experience has suggested that LGP and IB are effective in loss of weight in obese patients in short term. IB has an advantage of being done outpatient and has less complications, but it is less effective on weight loss compared to LGP. Prospective, randomized control trials are needed to choose best way.

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DISCREPANCIES IN THE RELATIONSHIP OF BMI AND TRADITIONAL CARDIOVASCULAR RISK FACTORS IN SUBJECTS WITH DIFFERENT LEVELS OF OBESITY

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Background: Obesity is related to increased cardiovascular risk, but does the cardiovascular risk increase with increasing BMI? The purpose of this study was to investigate this relation in a cohort with wide ranges of BMI.

Methods: Subjects participating in observational studies in our clinic were included. Baseline characteristics and laboratory values were collected according to standard protocol. Both, the group of lean subjects (i.e. BMI < 30) and the group of obese subjects (i.e. BMI ≥ 30) were categorized in quintiles according to BMI. The relation between BMI and cardiovascular risk factors were analyzed using ANOVA.

Results: The cohort consisted of 953 subjects (591 women, mean age 49.9±14.8 years) of which 377 lean subjects, with a mean BMI of 25.0±2.81 kg/m², and 576 obese subjects, with a mean BMI of 43.8±7.58 kg/m².

Total cholesterol, apolipoprotein B, LDLC and HDLC showed a significant dose–response relationship with increasing BMI in the lean group, but not in the obese group. Inflammatory markers like CRP, leukocyte count and C3 increased with increasing BMI in the obese group; in the lean subjects this association with BMI was only observed for C3.

Discussion: Lipid associated risk factors showed a significant relationship with increasing BMI, especially in lean subjects. This association was weaker in obese subjects. The association with inflammatory markers and BMI was strongest in obese subjects. The relationship between cardiovascular risk factors and BMI is lost in higher levels of obesity. In that case, inflammation seems to be clinically more prevalent.

P.399 SLEEVE GASTRECTOMY IN PATIENTS WITH DIABETES MELLITUS TYPE 2. A CASE SERIES OF 200 PATIENTS.

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Background: Type 2 diabetes mellitus (T2DM) and obesity are often associated in the same metabolic pathology and represent a significant public health problem. Although laparoscopic sleeve gastrectomy (LSG) is a relatively recent technique of bariatric surgery several studies have highlighted the effects in terms of resolution and improvement of diabetes.

Methods: Prospective case series of 200 diabetes mellitus patients who went to SG between December 2009 to December 2014. There were 200 patients. Male: 59 patients, Female: 141 patients. 101 patients with 1 oral drug 84 patients with combinations of oral drugs and 15 patients with insulin requirement. Mean Age 48 (range 24 to 75) years. Mean Preoperative Weight: 90.3±15 (65-210) kg. Mean preoperative BMI of 36.1±7 kg/m², mean fasting plasma glucose (FPG) of 153.2±22.9 mg/dL, mean glycosylated hemoglobin (HbA(1c)) of 7.4%±1.4%, and a mean T2DM duration of 5 years. All patients had an 18 month follow-up.

Results: 161 patients (80.5%) discontinued antidiabetic medications 6 months after LSG (%EBMIL mean was 77.1 ± 24.2 (range 26.1 to 134.4)%). HbA(1c) of 5.1%±.2%). 53 (26.5%) patients reduced at 50% the oral medicament. 5 (2.5%) patient continued with insulin. No new diabetic retinopathy occurred during the whole period of observation.

Conclusions: SG is a safe and effective treatment for obesity. This study confirms the efficacy of LSG in the treatment of T2DM and indicates that LSG can provide a significant percentage of treated patients with one year of remission of T2DM.

P.400 THE IMPACT OF BODY MASS INDEX ON SUCCESS RATE OF RECTOSIGMOID CANCER SURGERY

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Background: Technical difficulties which effect the outcomes of the abdominal operation are seen in obese patients, especially in rectum and gastric cancer. Some previous studies showed that increased body mass index (BMI) is associated with increased morbidity, reduced lymph node retrieval and prolonged hospital stay after colorectal surgery. The aim of this study was to assess the influence of obesity on surgical outcomes (surgical margin, number of lymph nodes excised) and surveillance of rectum cancer patients who were operated conventionally.

Methods: 128 rectosigmoid cancer patients operated e between January 2011 and September 2014 were included in this study. Patients were divided into two groups according to their BMI values. (BMI<30 and BMI≥30). According to their BMI values before surgery patients with BMI ≥30 kg/m² (n=39) were defined as obese. Patients with BMI <30 kg/ m² (n=89) were defined as normal group. Demographic data, surgical margins, number of lymph nodes retrieved, recurrence of the disease and surveillance of both groups were compared.

Results: There were no difference between obese and normal groups in terms of age, sex and stage of the disease. Surgical margins, number of lymph nodes retrieved, recurrence rate and surveillance of both groups were statistically similar.

Conclusions: This study showed that the obesity does not affect the outcomes of surgery in rectosigmoid cancer. However, prospective studies with larger number of groups were needed.

P.402 COMPARISON OF METABOLIC AND HISTOPATHOLOGICAL EFFICIENCY OF SLEEVE GASTRECTOMY AND GASTRIC PPLICATION; AN EXPERIMENTAL RODENT MODEL

Ali Solmaz¹

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Background: In recently, because obesity has become one of the major health problems, researchers are directed to work on the development of surgical techniques and new mediators playing roles in nutrition. Gastric plication (GP) and sleeve gastrectomy (SG) have gained popularity recently and widely used techniques in bariatric surgery. In this study, we aimed to compare the efficiency of SG and GP techniques on rats.

Methods: Wistar-hannover rats (n=18) were divided into three equal groups as SG, GP and control. The blood samples were taken before the operation and 30th day of operation. We measured weight of rats on first and 30th day of operation, gastrin, ghrelin and leptin levels. Gastrectomy was done for histopathological examination after scarification.

Results: Average weight loss was 10% for SG group and 6.5% for GP group. After 1 month of operation decrease of ghrelin and leptin values of GP and SG groups were significant compared to control group. Gastrin levels of SG group were increased significantly compared to control group. Histopathological examination revealed that decrease of ghrelin and leptin levels of GP and SG groups were significant compared to control group. Foveolar hyperplasia, cystic glandular dilatation and fibrosis were significantly higher in GP and SG groups compared to control group.

Conclusions: GP is an easier, less expensive and shorter period of operation time compared to SG. However GP could not provide effective weight loss as SG does, it could be a second choice of technique for bariatric surgery.

P.403**NESSFATIN-1 IMPROVES WOUND HEALING IN NON-DIABETIC AND DIABETIC RATS****Ali Solmaz¹**

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Background: Diabetes mellitus (DM) is one of the major causes of suppressed angiogenesis and impaired wound healing leading to chronic wounds. Nesfatin-1, a novel peptide, was reported to have antioxidant and anti-apoptotic properties. This study is aimed to investigate the potential healing-promoting effects of nesfatin-1 in non-diabetic/diabetic rats with surgical wounds.

Methods: In male Sprague-Dawley rats, experimental diabetes (n=16) was induced by intraperitoneal (ip) injection of streptozotocin (STZ, 55 mg/kg). Under anesthesia, dorsum skin tissues of non-diabetic (n=16) and diabetic rats were excised (1x1 cm, full-thickness), while control rats (n=16) had neither diabetes nor wounds. Half of the rats in each group were treated ip with saline, while the others were treated with nesfatin-1 (2 µg/kg/day) for 7 days until they were decapitated. Skin samples were obtained for the measurement of myeloperoxidase (MPO) activity, transforming growth factor-beta (TGF-β-1) and caspase-3 activity. Paraffin sections were stained with Hematoxylin&Eosin, Masson's trichrome and immunohistochemical stain for vascular endothelial growth factor (VEGF). ANOVA and Student's t-tests were used for statistical analysis.

Results: Compared to control rats, skin MPO activity (p<0.001) and caspase-3 level (p<0.05) were increased in saline-treated non-diabetic and diabetic rats, with a concomitant reduction in TGF-β-1 level (p<0.05); while nesfatin-1 reversed these changes. Histopathological examination revealed regeneration of epidermis, re-organization of collagen and a decrease in VEGF immunopositive cells in nesfatin-1-treated groups.

Conclusions: Nesfatin-1 improved diabetes-enhanced wound healing, involving the suppression of neutrophil recruitment, apoptosis and VEGF activation. It appears that influence of VEGF diminishes when its inducers are reduced by antioxidant nesfatin-1.

P.407**INTRAGASTRIC BALLOON EXPERIMENTAL MODELING****O. Ioffe¹**

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Background: The intragastric balloon method is popular for treatment of obesity. In the literature we have not found evidence of possible morphological changes of the stomach wall against of balloon stay.

Methods: Chronic experiment was conducted on 22 white rats. In 21 rats gastrotomy was performed, with input the model of intragastric balloon - solid silicone bead (d=5mm) coated by «BIB System» (Allergan) balloon material. On 6, 8 and 14 days histological examination of stomach wall was made. Changes in the wall of stomach compared with healthy rat stomach wall.

Results: On the sixth day of experiment extensive necrotic foci of all the layers of the rat stomach wall were found, with expressed desquamation of surface epithelium, atony of muscular layer, detachment of the mesothelium in large areas. On the eighth day desquamation of surface epithelium of the mucous membrane, swelling of blood vessels of submucosa, atony of the muscle fibers, dystrophic changes of intermuscular plexus, detachment of the mesothelium in some areas were found. On the fourteenth day inflammatory changes have not progressed. Desquamation of surface epithelium of the mucous membrane and moderate atony of muscle fibers were found. Serosa largely has been preserved.

Conclusions: Using the intragastric balloon cause changes in all layers of the stomach wall, with maximum expression of inflammation within the first 14 days of balloon stay.

P.408 EVALUATION OF ADIPOSE TISSUE COMPOSITION BY ¹H NMR AND IT'S RELATIONSHIP TO ULTRASONOSCOPIC MEASUREMENTS IN OBESE PATIENTS

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Background: Central obesity is associated with numerous pathophysiologic processes and comorbidities.

The aim of the study: to find relationship of the differences of composition and distribution of fat tissue in obese patients.

Methods: 30 obese patients (17 women, 13 men) were recruited in prospective study. Mean age 43,8 yrs, mean BMI – 48,7 kg/m². Body fat distribution was measured by ultrasonoscopy. Samples of adipose tissue (AT) were taken from subcutaneous, preperitoneal and visceral compartments during the bariatric surgery. AT composition was determined by proton nuclear magnetic resonance (¹H NMR).

Results: There was different composition of saturated and unsaturated fatty acids in subcutaneous (28.1 % and 71.9 %), preperitoneal (28.8 % and 71.2 %) and visceral fat (26.4 % and 73.6 %) compartments. In the patients with metabolic diseases subcutaneous fat thickness was higher compared with metabolically healthy individuals (4.46 cm vs 2.52 cm, p<0.001). Saturated fats from preperitoneal compartment correlated with waist circumference (p<0.001, r=0.69), weight (p<0.001, r=0.62) and BMI (p<0.001, r=0.61). Saturated fats from visceral AT correlated with visceral fat thickness (p<0.05, r=0.51).

Conclusions: The percentages of saturated and unsaturated fatty acids differ in subcutaneous, preperitoneal and visceral fat compartments in obese patients. Subcutaneous fat thickness is related with metabolic diseases in obese patients. This study may potentially provide an additional data for the assessment of AT compartments, especially preperitoneal, and their influence on metabolic diseases.

P.410 MID-TERM RESULTS OF LAPAROSCOPIC REVISION OF SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS FOR REFRACTORY GASTROESOPHAGEAL REFLUX

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Background: Laparoscopic sleeve gastrectomy (LSG) has rapidly become a primary bariatric surgery due to relative simplicity and satisfactory results. In the long term follow-up, refractory gastroesophageal reflux (GERD) would necessitate further bariatric procedure such as laparoscopic Roux-en-Y gastric bypass (LRYGB).

Methods: From January 2006 to February 2014, 741 patients underwent LSG for morbid obesity in Min-Sheng hospital. A retrospective analysis of revision of LSG to LRYGB was performed to assess the efficacy for refractory GERD relief. Radiologic characteristics were collected for all patients before and after revision.

Results: Twelve patients (10 women, two men; mean age 35 years) were enrolled for revision of LSG to LRYGB for GERD. In this case series, two patients had GERD history before bariatric surgery. The indication for revision was refractory GERD after LSG. The mean interval between the two procedures was 30 months. Gastric tube dilation was diagnosed in nine patients (75%) from upper gastrointestinal series. Eight patients (58.3%) with hiatal hernia were found by panendoscopy before revision. All patients with hiatal hernia underwent LRYGB with hernia repair. Mean operation time was 150 minutes. The median follow-up was 13.5 months. After revision, proton pump inhibitor (PPI) medication was discontinued in nine patients (75%) with refractory GERD. Three patients got slightly improved in GERD but still taking PPI for symptoms relief at the end of follow-up. Post-LRYGB UGI series showed adequate gastric emptying without hiatal hernias in all patients. Postoperative complications were observed in one patient as intraluminal bleeding of gastrojejunostomy and two cases with stricture of gastrojejunostomy.

Conclusion: Revision of LSG to LRYGB is safe and effective treatment for refractory GERD after LSG. However, 25% patients have persistence of GERD after revision in our study. Additional investigations are necessary.

Keywords: Sleeve gastrectomy. Roux-en-Y gastric bypass. Gastroesophageal reflux. Revision

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ADJUSTABLE GASTRIC BANDING FOR FAILED VERTICAL BAND GASTROPLASTY

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Background: Long term results after VBG have been disappointing and because of weight regain, reoperation is needed for some patients.

It is well known that the morbidity and mortality rate after revision surgery is significantly higher. Gastric banding is a restrictive procedure with low postoperative complications.

Our objective was to study satisfaction, weight loss and complication rates in patients operated with AGB following failed VBG.

Methods: This was a retrospective study including 221 patients operated between 2006 and 2010 with AGB after failed VBG. Mean BMI was 38. Postoperative follow-up was carried out with adjustment and a nutritionist. Every patient was contacted by telephone for a satisfaction and tolerance survey.

We reported reoperation rate, morbidity, mortality, mean follow-up, % Excess Weight Loss (EWL), % ExcessBMI Loss (EBMIL)

Results: Among the 221 patients, only 208 were successfully operated with AGB. Among them, 74 were contacted by telephone. The rate of satisfaction was 88%. Tolerance was excellent in 33%. There were no postoperative complications and mortality rate was nil. Seventeen patients were reoperated: in 10 cases for removing the band (4,8%), in 6 cases for repositioning the port, and in one case for changing the band due to a link. Mean follow-up was 5 years (0-10). Mean BMI at the end of the study was 31 (18-62). EWL was 46% and EBMIL 72%.

Conclusions: AGB after failed VBG is safe with low postoperative complications. After 5 years, the results are acceptable.

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THE ROLE OF MINI GASTRIC/ONE ANASTOMOSIS GASTRIC BYPASS (MGB/OAGB) AND SLEEVE GASTRECTOMY (SG) IN PROVIDING DIABETES RESOLUTION. AN EUROPEAN SURVEY.

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Introduction: A large retrospective study was undertaken to define the efficacy of both MGB/OAGB and SG in providing type 2 diabetes mellitus T2DM resolution in morbidly obese patients (pts).

Patients and Methods: Eight European centers were involved in this survey. T2DM was preoperatively diagnosed in 313/3252 pts (9.62%). 175/313, 55.9% underwent MGB/OAGB while 138/313, 44.1% received SG between January 2006 and December 2014. Preoperative parameters were considered fasting plasma glucose FPG 182.5±69.7 and glycosylated hemoglobin HbA1c 7.6±1.5 for MGB/OAGB, and FPG 189.9±66.4 and HbA1c 7.3±1.3 for SG.

Results: No significant difference was observed in preoperative parameters between MGB/OAGB or SG pts. 206/313 (63.7%) pts reached one year of follow up.

Mean BMI for MGB/OAGB pts was 33.1±6.6, mean BMI for SG pts was 36.0±6.0 ($p<0.001$)

EWL% for MGB/OAGB pts was 64.7±22.9, EWL% for SG pts was 52.4±18.3 ($p<0.001$).

77/96 (80.2%) MGB/OAGB pts vs. 56/110 (50.9%) SG pts are in remission ($p<0.001$)

In a multivariate logistic regression analysis, high baseline HbA1c (OR = 0.623, 95% CI 0.419-0.925, $p=0.01$) and preoperative consumption of insulin or oral antidiabetic agents (OR = 0.256, 95% CI 0.137-0.478, $p<0.001$) were negative predictors whereas MGB/OAGB resulted as a positive predictor (OR = 3.888, 95% CI 1.654-9.143, $p=0.002$) of diabetes remission.

Conclusions: At univariate and multivariate analysis MGB/OAGB seems to outperform significantly SG. Three independent variables able to determine T2DM remission at 12 months have been identified.

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REVISIONAL BARIATRIC SURGERY FOLLOWING FAILED PRIMERY RESTRICTIVE PROCEDURES

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Introduction: Gastric banding still been on a large scale, although it is declining and sleeve gastrectomy is rising. However, the results in terms of loss of weight were very minimal and patients' starts to gain more weight after a very short period of time, while malabsorptive procedures can offer a better solution for this problem.

Materials & Methods: 54 patients with failed gastric band in terms of loss of weight will be presented.as well as 4 patients with failed sleeve gastropasty to reduce weight. 4 patients with gastric bypass also failed to achieve a target weight loss, all of them had gone laparoscopic conversion to Scopinaro's Biliopancreatic Diversion in one setting. The results of this will be presented.

Results: 62 patients underwent conversion to biliopancreatic diversion, weight loss after conversion was convincing, sustained.

All procedures were done laparoscopically with no morbidities or mortalities.

Detailed results will be presented.

Conclusion: Restrictive procedure in the form of gastric band, sleeve, even gastric bypass does not lead to loss of weight and another procedure has got to be done for that. Scopinaro's Biliopancreatic Diversion is a feasible and safe procedure after failure of restrictive procedures.

P.416

ILEAL TRANSPOSITION IN RATS INFLUENCED GLUCOSE METABOLISM AND HSP70 LEVELS.

Stygar Dominika¹

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Background: Ileal transposition procedure (IT), in combination with sleeve gastrectomy, is widely used to induce diabetes remission and to control related metabolic abnormalities. A transposition of long segment of distal ileum in obese Zucker rats improved glucose tolerance 6 months after IT. It was a premise to examined long - term effect of ileum transposition on liver glycolytic enzymes and HSP70 content in euglycemic group of operated Zucker rats.

Methods: 11 to 12-week-old, 200-220 g, twenty obese male Zucker rats (CrI:ZUC-Lep^{fa}) underwent transposition of 50% distal ileum or sham surgery. Six months after surgery, HSP 70 liver tissue concentrations were assessed in duplicates by immunoenzymatic method with the commercially available ELISA kits (USCN Life Science Inc., USA). Tissue concentration of glycogen synthase kinase alfa (GSK-3 α), glucose 6-phosphatase (G6PC), glycogen phosphorylase (PYGM) and phosphofructokinase (PFK-1) in liver was assessed in duplicate by immunoenzymatic method with the commercially available ELISA kit (USCN Life Science Inc., USA) after optimization procedure.

Results: Six months after surgery tissue concentrations of glycogen synthase kinase alfa (GSK-3 α), glucose 6-phosphatase (G6PC), glycogen phosphorylase (PYGM) and phosphofructokinase (PFK), HSP70 in liver were assessed by immunoenzymatic methods. HSP70 values were significantly higher in the IT group compared to SHAM. G6PC liver concentrations in the IT group were almost 1.45-fold lower than in the SHAM operated rats.

Conclusions: Obtained results, suggest a suppressed hepatic glucose production, uptake and also reduced metabolism and storage of glycogen. The present study for the first time presents the long-term effect of ileal transposition on HSP70, and glycolytic enzymes liver concentrations. In our experiment six months after transposition of 50% of ileum levels of glycolytic enzymes assessed in the liver were lowered.

P.418
THYROID CANCER PREVALENCE IN BARIATRIC POPULATION: REPORT FROM A BARIATRIC CENTER OF EXCELLENCE.

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Background: Thyroid cancer (THC) is the commonest endocrinal malignancy. Several studies have evaluated the association between obesity and thyroid cancer. However, the prevalence in bariatric population remains uncertain. The aim of the present prospective study was to report the prevalence of THC in patients candidate to bariatric surgery (BS) and to assess the predictive value of preoperative thyroid US and hormonal assay.

Methods: 537 consecutive patients underwent primary BS (81% female, aged 18-65 years, mean 40-49.9 BMI kg/m²) during the last 3 years. All patients underwent thyroid US and TSH, FT3, FT4, insulin assay as preoperative screening. Sleeve gastrectomy and RYGB were the commonest procedures.

Results: TSH level was correlated with increasing BMI. The median TSH level in each class of obesity was: (class I: 1,80), (class II: 1,84), (class III: 2,14), (class IV: 2,45). 13 patients (2.4%) showed THC suspected at preoperative US (11 papillary): 9 (69,2%) were class III; 3 (23,1%) were class I and 1 (7,7%) was class IV. The mean plasma insulin level in each obesity class group was 21,38; 25,98; 33,94; 45,78 respectively. All the cases had US guided FNA which confirmed the presence of neoplasia and total thyroidectomy was done before bariatric procedures.

Conclusions: Obesity influences serum insulin level which is expected to enhance TSH levels considered a possible promoting factor for cancer. The routine preoperative screening by US and hormonal assay in bariatric population seems to be useful for the early detection of THC. Our results are similar to the recently published data suggesting a higher prevalence of THC in morbid obese.

P.425
HIATUS HERNIA ASSESSMENT DURING LAPAROSCOPIC SLEEVE GASTRECTOMY- HOW RELEVANT- ASIAN STUDY

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Amarchand Bajaj

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Background: Gastroesophageal reflux disease (GERD) and hiatal hernia (HH) are significantly increased with morbid obesity to a prevalence as high as 50%. We present our experience of 106 patients divided into two groups, first group (53) who underwent LSG and HHR in only pre-diagnosed condition, second group (53) who underwent LSG and HHR in all the patients who were diagnosed preoperatively and neo- intraoperatively.

Methods: This study was done at Max Super speciality Hospital, Saket, New Delhi. From August 2010 to July 2012, out of 50 patients, in 12 patients, LSG was performed with HHR who were diagnosed preoperatively. From August 2012 to August 2014, out of 56 patients in 24 patients LSG was performed with HHR who were diagnosed preoperatively as well as neo-intraoperatively.

Results: In first group GERD remission occurred in 13 patients (26%) and in the remaining 3 patients, antireflux medications were diminished. "Neo" GERD symptoms developed in 12 of the patients undergoing SG in first group compared with 0% of patients undergoing SG plus HHR in second group. The mean follow-up was 6 months

Conclusion: In all the patients undergoing SG, efforts should be given to diagnosed HH preoperatively as well as intraoperatively as small hiatal defects could be underdiagnosed at preoperative endoscopy. The combine procedure of LSG with HHR is safe and can relieve symptoms of GERD completely in patients with morbid obesity and GERD.

CHANGES IN QUALITY OF LIFE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY, ADJUSTABLE GASTRIC BANDING AND ROUX-EN-Y GASTRIC BYPASS IN ELDERLY PATIENTS.

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Background: The beneficial effects of bariatric surgery in young and adult morbidly obese patients are nowadays well known. Excess weight loss of 60 to 70% and good remission of obesity related comorbidities are achieved. However, it is unclear whether health-related quality of life (HR-QoL) is sustained in morbidly obese elderly adults who underwent sleeve gastrectomy (SG), adjustable gastric banding (AGB) or Roux-en-Y gastric bypass (RYGB). This study evaluates the quality of life, biometrical outcomes and safety of bariatric surgery in elderly.

Methods: Data analysis of 100 elderly bariatric patients (≥65 years-old) who underwent bariatric surgery was performed through HR-QoL questionnaires (e.g. SF-36, IWQOL-LITE, BAROS). Minimal follow-up had to be at least 12 months. Also weight loss and adverse events were collected.

Results: Preliminary data for this study expected to be completed may 2015 show that short-term complications were higher for REDO-RYGB compared to RYGB, SG or AGB. Significantly more excess weight loss was achieved in RYGB and SG patients compared to patients that underwent AGB. Data showed bariatric surgery reduces polypharmacy in elderly and improves quality of life.

Conclusions: Bariatric surgery is a good technique for weight reduction, co-morbidity reduction and HR-QoL improvement in elderly patients. At time of the IFSO congress in Vienna we are able to present the final results of this study.

P.430 SLEEVE GASTRECTOMY (LSG) IN LOW BMI INDIANS WITH TYPE II DIABETES (T2DM) - RETROSPECTIVE ANALYSIS OF GLYCEMIC CONTROL.

Poonam Shah¹

Pallavi Shah², Jayashri Gangwani³, Soniya Sane⁴, Shashank Shah⁵

Background: LSG is known to be effective for T2DM in the Morbidly Obese patients, however very few studies quote results LSG of in non-morbidly Obese. Such study is more important for Asians since T2DM occurs at a lower BMI.

Methods: Retrospective analysis of prospectively collected data of 32 patients, M:F 19:13, Aged 28 to 60 years, BMI 26.4 to 34 kgs/m², with Metabolic syndrome and uncontrolled T2DM, HbA1c > 7.5 %, C. Peptide > 1, subjected to Laparoscopic Sleeve Gastrectomy (LSG) were evaluated at baseline and 2 years for glycemic control and % EWL. 22/ 32 were on Oral Hypoglycemic drugs (OHA), 10/32 on Insulin in addition. Average duration of T2DM was 5 years.

Results: 25 of the 32 were in remission and 7 had improvement in glycemic status at 2 years, with mean % excess weight loss of 68%. Of those 10 on insulin, 7 were in remission and 3 improved on OHA and were off insulin. Remission correlated with % EWL.

Conclusion: LSG could improve T2DM in non-morbidly obese Indians. Larger studies with longer follow up may be recommended.

P.432 STAPLER LINE REINFORCEMENT IN LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: We herein report the outcome of Laparoscopic sleeve Gastrectomy (LSG) in different techniques of reinforcement.

Methods: Between 2006 and 2014, 3003 patients underwent LSG with 4 different ways of reinforcement. Leak rate and bleeding rate were measured and compared.

Results:

	No Reinforcement	Over Sewing	DUET TRS	PERISTRIPS	Total
Patients	612	270	1057	1064	3003
Bleeding Cases Related to Stapler Line or Intra Gastric or Unknown Origin	20	0	15	18	53
% of Bleeding	3.26%	0	1.42%	1.70%	1.76%

	No Reinforcement	Over Sewing	DUET TRS	PERISTRIPS	Total
Patients	612	270	1057	1064	3003
Bleeding	20 (3.26%)	0	17 (1.6%)	26 (2.44%)	63 (2.1%)
Leak	5 (0.82%)	3 (1.11%)	11 (1.04%)	6 (0.56%)	25(0.83%)

Conclusions: Reinforcement of the stapler line with peristrrips in LSG reduces both leakage and bleeding rates.

P.439
IMPACT OF URINARY STRESS INCONTINENCE (USI) ON PSYCHOLOGICAL, SOCIAL AND SEXUAL FUNCTIONING BEFORE AND AFTER BARIATRIC SURGERY

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Background: Urinary Stress Incontinence (USI) is a known co-morbidity of obesity and may have an adverse impact upon Psychological, Social and Sexual Functioning (PSS). The purpose of this study was to examine the incidence of USI among bariatric surgical candidates and determine if there is an improvement in PSS related to USI in patients after bariatric surgery.

Methods: The study population included 150 severely obese patients (BMI=46±17) undergoing bariatric surgery. Among the population, 23 patients (20 females, 3 males) reported to the clinician that they had USI. Psychological, Social, and Sexual Functioning (PSS) were evaluated using 1 to 10 scales of symptomatology before and 6 months following bariatric surgery.

Results: With bariatric surgery, patients lost an average of 25.92kg, for a total % change in BMI 22.28%. Along with weight loss were significant improvements in USI and associated PSS functioning. At 6 months, nearly half (47.8%; n=11) of patients with USI, symptoms completely resolved post-surgery and, in 12 out of 23 patients (52%), symptoms improved. A mean improvement in psychological functioning scores for USI patients were also found post-operatively, i.e. 7.48 to 2.5, as were scores on the scales representing social and sexual functioning, i.e. 6.91 to 2.5 and 6.74 to 2.0, respectively.

Conclusion: Bariatric surgery improves or resolves USI, along with highly significant improvement in PSS quality of life.

P.440
IMPACT OF URINARY STRESS INCONTINENCE (USI) ON PSYCHOLOGICAL, SOCIAL AND SEXUAL FUNCTIONING BEFORE AND AFTER BARIATRIC SURGERY

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Conclusion: Bariatric surgery improves or resolves USI, along with highly significant improvement in PSS quality of life.

P.446

IMPROVEMENT OF QUALITY OF LIFE RELATED TO WEIGHT LOSS

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Introduction: In obese patients change in quality of life (QOL) is related to weight loss when measured with a disease-specific questionnaire. The effect of weight change is unknown in bariatric patients. This study evaluates the relationship between weight loss and improvement of QOL using a disease-specific (Impact of Weight on Quality of Life-Lite, IWQOL-L) and a generic (RAND-36) measurement of QOL in laparoscopic Roux-en-Y gastric bypass (RYGB) patients.

Methods: 1,256 primary RYGB patients were included if QOL measurements were available at baseline and 15 months post-surgery. IWQOL-L consists of a total score and 5 domains (physical function, self-esteem, sexual life, public distress, work); RAND-36 is a general health-related QOL questionnaire consisting of 3 domains (physical health summary, mental health summary, health change).

Results: Mean baseline Body Mass Index (BMI) was 45kg/m², 82% was female. Total body weight loss (TBWL) at 15 months was 31%. QOL improved significantly in all patients for all domains of both IWQOL-L and RAND-36. QOL at 15 months was significantly related to %TBWL all domains of both IWQOL-L and RAND-36 ($p \leq 0.001$ in all). Change in QOL was related to %TBWL in all domains of IWQOL-L, but not to mental health summary ($p=0.268$) and health change ($p=0.238$) of RAND-36.

Conclusion: QOL improved significantly in all patients after gastric bypass. Patients who lose more weight have a better QOL 15 months after surgery. Improvement of QOL is influenced by weight loss in all domains of IWQOL and in one domain of RAND-36.

P.447

NATIONWIDE ANALYSIS OF POST-BARIATRIC BODY CONTOURING SURGERY

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Background: Body contouring surgery (BCS) might improve outcome after bariatric surgery (BS), however there is little knowledge of differences between patients who have undergone BCS and patients who have not. With this nationwide study we aim to get more insight in these populations.

Methods: 1334 patients who had BS between October 2011 and October 2012 were selected. Questionnaires were completed regarding demographics, BCS, depression (Beck depression Inventory), self-esteem (Rosenberg Self-esteem Scale), body image (Body Shape Questionnaire, BSQ, & Multidimensional Body-Self Relations Questionnaire) and quality of life (RAND-36).

Results: The response rate in the first 10 weeks was 52% (652/1245). 570 patients signed informed consent and were included; mean FU after BS was 34 months. Patients were divided into groups: A: underwent BCS (11%, n=61), B: no desire for BCS (25%, n=142) and C: desire for BCS (61%, n=344). BMI of group A was 28kg/m² versus 31kg/m² in both group B ($p < 0.001$) and group C ($p < 0.001$). Group C scored highest on BSQ: 49 versus 39 (group A; $p < 0.001$) and 31 (group B; $p < 0.001$) and lowest on body areas satisfaction: 2.69 versus 3.15 (group A; $p < 0.001$) and 3.22 (group B; $p < 0.001$). In group C, 48% never consulted a plastic surgeon.

Conclusions: Dutch post-bariatric patients who undergo BCS have excellent weight loss. Patients who desire BCS have a negative body image, which is known to cause weight gain in obese patients. Many patients do not consult a plastic surgeon, which may lead to underestimation of these issues by doctors and insurance companies.

P.449**WERNICKE'S ENCEPHALOPATHY FOLLOWING SLEEVE GASTRECTOMY****Dimitrios K. Manatakis**¹Vassilios Kalles¹, Nikolaos Stamos¹, Ioannis Terzis¹, Nikolaos Georgopoulos¹¹ *Surgical Department, Athens Naval and Veterans Hospital, Athens, Greece*

Background: Micronutrient deficiencies, considered obsolete in developed countries, have reemerged as a complication of malabsorptive bariatric surgery. Restrictive procedures are less prone to cause nutrient deficiencies, since the primary mechanism of action is reduction of food intake.

Methods: A 51-year-old male patient underwent an uneventful laparoscopic sleeve gastrectomy (BMI 41.5). He was readmitted 2 months later, with a 5-day history of protracted vomiting and malaise. Clinical examination, basic laboratory tests and imaging studies were within normal range. Upper GI endoscopy was negative for sleeve stenosis or delayed gastric emptying. On the 5th day, he developed ophthalmoplegia with diplopia and left arm paresis, however brain MRI scans were negative for stroke. His clinical condition gradually deteriorated, with generalized muscle weakness and confusion, and he developed paralytic ileus and lower respiratory tract infection.

Results: Despite nutritional support with parenteral infusions and vitamin supplements, thiamine levels were low and diagnosis of Wernicke's encephalopathy was established. Despite aggressive intravenous vitamin B1 supplementation, the patient was intubated due to respiratory failure and succumbed in the ICU three weeks later.

Conclusions: Wernicke's encephalopathy is an acute neuropsychiatric disorder, due to thiamine deficiency, traditionally described in chronic alcohol abusers. A high index of clinical suspicion is required, since initial symptoms may be non-specific and the classic triad of ophthalmoplegia, gait/stance disorders and mental confusion is present only in one third of patients. Laboratory tests can be within normal range and typical MRI brain lesions are found only in 50% of cases. Aggressive supplementation with intravenous thiamine should not be delayed until confirmation of diagnosis, as it may fully reverse symptoms, but almost half the patients will still display permanent neurological deficit.

P.451**EARLY RESULTS OF MINI-GASTRIC BYPASS IN A MAINLY SUPER-OBES PATIENT GROUP****Karl P. Rheinwald**¹Sebastian Kolec¹, Andreas Plamper¹*St. Franziskus Hospital, Dept. for Bariatric and Metabolic Surgery, Cologne, Germany*

Background: The Mini-Gastric Bypass (MGB) is a bariatric operation considered to be simpler and faster than Roux-en-Y-Gastric Bypass (RNYGB). Therefore it is supposed to be a good indication in super-obese and high-risk patients. Although it is performed since 1997 only few studies address on this special item.

Methods: As primary indication we perform MGB since 2011 mainly for the treatment of super-obesity (BMI>50) whereas RNYGB remains our procedure of choice for BMI<50. The prospectively collected data of 167 primary MGBs since 2011 including follow-up data were analyzed statistically.

Results: In 167 cases of MGB (46 m, 121 f) the average weight was 153,7 kg (113,0 – 224) with average BMI 54,1 kg/m² (38,0 – 75,3). Operation time was 81,6 minutes (45 – 160) and major complication rate demanding operative revision was 1,96% (n=3). Among those were 1 laparotomy for postoperative hemorrhage and 2 (negative) relaparoscopies. The leak-rate was 0,65% (conservatively treated with antibiotics). 30d-mortality was 0. Hospital stay was 4,5 days (3 – 31). Excess weight loss (EWL) after 12 months was 66,0 % (38,0 – 96,4) in 95 patients and EWL after 24 months was 68,6 % (27,8 – 103,4) in 35 patients.

Conclusions: We observed a low complication rate perioperatively (no leak requiring stent or re-operation) and a high EWL 24 months after MGB in 167 mainly super-obese patients.

P.453**SIMULTANEOUS GASTRIC AND DUODENAL EROSIONS DUE TO ADJUSTABLE GASTRIC BAND****Dimitrios K. Manatakis**¹Ioannis Terzis¹, Nikolaos Stamos¹, Christos Stoidis¹, Nikolaos Georgopoulos¹¹ *Surgical Department, Athens Naval and Veterans Hospital, Athens, Greece*

Background: With an incidence of 3%, gastric erosion is an uncommon but feared late complication of adjustable gastric banding (AGB). Duodenal erosion by the connection tubing is a much rarer finding. We present our experience with a case of simultaneous gastric and duodenal erosions 4 years after laparoscopic gastric banding for morbid obesity.

Methods: A 34-year old female patient presented at the emergency department with a 5-day history of vomiting and epigastric pain. She had undergone laparoscopic AGB 4 years before (BMI 36.7), resulting in a weight loss of 30 kg. Laboratory tests were within normal range and abdominal CT scans were inconclusive. However, upper GI endoscopy revealed the band partially free in the gastric lumen and the connection tubing eroding into the duodenal bulb. The patient consented to surgical treatment.

Results: The eroding band was removed laparoscopically and an omental vascularized pedicle was fashioned and inserted into the gastric band tunnel. The duodenal erosion was primarily sutured. Postoperative course was uneventful. Two years later she underwent open Roux-en-Y gastric by-pass for weight regain.

Conclusions: Duodenal erosion is a rare complication of AGB, caused by the connection tubing of the band. A high index of clinical suspicion is required, since erosion symptoms are usually vague and non-specific. Diagnosis is confirmed on upper gastrointestinal endoscopy and band explantation is the mainstay of treatment, with revision or conversion to other bariatric modalities at a second stage.

P.454

AST TO ALT RATIO IN NAFLD IS NON-PREDICTIVE: NEED FOR LIVER BIOPSY.

Bethany Smith¹

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Background: Spectrum of NAFLD ranges from benign steatosis to steatohepatitis (NASH), the latter can progress to fibrosis, cirrhosis and predisposition to hepatocellular carcinoma (HCC). These conditions require surveillance. Definitive diagnosis of NASH is currently only available following liver biopsy. The AST to ALT ratio (AAR) is a non-invasive screening tool with AAR<0.8 suggestive NAFLD.

Methods: We analyzed AAR and liver biopsy results of 15 patients undergoing bariatric operation. Trucut liver biopsies were taken at laparoscopy whose liver had features suggestive of NAFLD intra operatively. AAR and histopathology were studied to give sensitivity, specificity, positive predicted value (PPV) of AAR as screening tool for NASH/fibrosis.

Results: Only 5 (33%) had steatosis. Steatohepatitis was seen in 7 (47%). 3 (20%) had both steatohepatitis and fibrosis. One had cirrhosis (no bariatric procedure) on histology. Thus, AAR showed Sensitivity =50%, Specificity =78%, PPV of 60% and NPV of 70% in this preliminary study.

Conclusions: Sensitivity and PPV at predicting NASH was poor. High false positive rate (40%) makes it unsuitable for screening in bariatric population. The only reliable method for diagnosing NASH and fibrotic pathology remains a liver biopsy. Bariatric surgeons should have a low threshold for liver biopsies to ensure liver surveillance for cirrhosis and HCC.

P.455

GALLSTONE MORBIDITY FOLLOWING BARIATRIC SURGERY: SHEDDING THE POUNDS, GAINING THE STONES

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Background: Weight loss after bariatric surgery is known to increase the formation of gallstones leading to a spectrum of clinical presentations. The aim was to ascertain the incidence and clinical presentation of symptomatic gallstone disease in patients in whom routine pre-operative screening was not performed prior to bariatric surgery.

Methods: A retrospective review of patients undergoing bariatric surgery between January 2010 and February 2013 in a Level 4 bariatric centre.

Results: A total of 757 patients (22% male) underwent bariatric surgery comprising of gastric bypass (n=514, 67.9%), gastric banding (n=132, 17.4%) and sleeve gastrectomy (n=111, 14.6%). Median follow-up 3.6 years (1.7-4.9 years). Thirty eight patients who underwent cholecystectomy prior to bariatric surgery (5.0%) and 2 patients who underwent open cholecystectomy at the time of gastric bypass were excluded. Of the remaining 717 patients, preliminary results identified 15 patients (2.1%) who underwent laparoscopic cholecystectomy following bariatric surgery between 0.3-3.4 years (median 1.1 year). Ten patients underwent elective cholecystectomy

for biliary colic. Five patients underwent emergency laparoscopic cholecystectomy for severe biliary colic (n=3), gallstone pancreatitis (n=1), ductal stone (n=1). No patient required conversion to an open procedure. All patients undergoing cholecystectomy following bariatric surgery were female.

Conclusions: Preliminary results showed a lower than expected incidence of gallstone disease resulting in cholecystectomy at our centre which may be a result of patients undergoing cholecystectomy out of centre. Previous open gastric bypass surgery did not result in open conversion. There seems to be a gender predisposition towards developing symptomatic gallstone disease following bariatric surgery.

P.459
COMPLICATED OPEN BANDED GASTRIC BYPASS IN A 24 YEAR-OLD WOMAN WITH BMI 29,8 AND LACK OF CO-MORBIDITIES

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Background: A 24 year-old female patient presented with severe dysphagia and ongoing weight-loss (BMI 20,7kg/m²) 7 months after open banded gastric bypass in a European Bariatric Centre, performed with her BMI being 29,8 (85kg), without any co-morbidities. 4 months postoperatively endoscopic pneumatic dilatation of her GE-anastomosis without sedoanalgesia was performed by the same surgeon. Complete lack of information about the necessity of lifelong vitamin and calcium supplementation was apparent.

Methods: Contrast studies showed subtotal stenosis of the gastrojejunostomy with an unknown type of band around this zone and a second band about 10cm inferiorly. On gastroscopy she had a subtotal inflammatory stenosis of the GE-junction with a semicircular eroded gastric band inside the pouch. We decided to explore by laparoscopy.

Results: Laparoscopically we took down adhesions, resected a large jejunal blind loop at the GE-junction, extracted the self-constructed gastric plastic band as well as the second self-made band which attached the gastric remnant to the anterior abdominal wall and finally closed the gastric pouch with stitches. After antibiotic therapy for postoperative fever, leucocytosis and mild epigastric pain the postoperative course was uneventful.

Conclusions: Open banded gastric bypass with self-made gastric bands does not seem to be a good treatment for non-obese patients and should be avoided.

P.460
COMPERATIVE PH-MONITORING STUDIES AFTER ROUX-EN-Y GASTRIC BYPASS, SLEEVE GASTRECTOMY OPERATIONS AND INTRAGASTRIC BALLOON INSERTION IN MORBIDLY OBESE PATIENTS

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Background: Roux-en-Y Gastric bypass is effective bariatric surgical procedure, that can reduce high acidity and GERD symptoms in morbidly obese patients.

Methods: The Mini-open Roux-en-Y Gastric Bypass (MORYGB) and Sleeve Gastrectomy (SG) surgical techniques were utilized in treatment of morbidly obese patients. Average BMI was 47.1 kg/m² (35-79). 238 patients with GERD symptoms prior to surgery were divided in four groups and the results of pH-monitoring before and after bariatric surgical procedure were analyzed. 1-st Group - 152 patients with symptoms of GERD, that undergone MORYGB, 2-nd Group - 34 patients, that undergone SG, 3-rd Group - 41 patients were treated with air-filled intragastric balloon (IGB), 4-th Group - 11 patients with revision MORYGB surgery who gained weight after previous SG.

Results: In 1-st group 78% of patients had complete resolution of GERD symptoms, with normalization of pH after surgery. In 2-nd Group pH-monitoring showed no significant effect of SG on symptoms of GERD even after successful amount of weight loss following surgery. In 3-rd Group with insertion of air-filled Intragastric Balloon (IGB, Helioscopic, France) for 6 months according to pH-monitoring the gastric and esophageal acidity and GERD symptoms can be changed only temporarily by using anti-acid medications. In 4-th Group of patients with GERD who undergone revision Roux-en-Y Gastric Bypass surgery after previous SG, in 9 out of 11 patients we observed normalization of pH and significant reduction of GERD symptoms postoperatively.

Conclusion: The Roux-en-Y Gastric Bypass operation is most effective bariatric surgical procedure in reducing of high acidity and resolving of GERD symptoms, that were present prior to surgery. Using IGB and SG had no effect on reducing GERD symptoms.

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) FOR MORBID OBESITY IS BOTH A SUCCESSFUL TREATMENT AND A RISK FACTOR FOR DEPRESSION; RESULTS OF A PROSPECTIVE COHORT STUDY

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Background: Obesity is associated with co-morbidities including anxiety and depression. This trial assessed the post-operative effects of LAGB on such conditions.

Methods: Consecutive patients undergoing LAGB were evaluated; inclusion/ exclusion criteria were applied. Patients were assessed pre-operatively, and 6-monthly post-operatively, by a consultant physician. Baseline demographic data was collected and validated questionnaires (patient health questionnaire-9) were used to establish an anxiety-depression diagnosis. Anti-depression/anxiolytic medication (ADM) use was recorded at each consultation. Remission was defined as a 6-month period without symptoms and pharmacotherapy. Minimum follow-up was 24 months. Parametric data were assessed with t-tests; proportions with Chi-squared/Fisher's exact tests.

Results: 119 patients with a median age of 43.3 years and mean pre-op BMI of 48.7(±8)kg/m² were included. Percentage excess body weight lost (%EBWL) was 32.8±18, 39.8±21.4, 38.5±21.3, 37.0±22.3, and 43.1±14.1% at annual follow-up. 45(38%) patients had a depressive disorder pre-operatively; no significant changes in this proportion were seen post-operatively. Of the 45 pre-operatively diagnosed patients, significant reductions in the proportion requiring ADM extending until 60-months post-LAGB are demonstrated (p<0.001). A maximum of 45% achieve remission and 70% improvements in depressive symptoms/ADM use at 48-months post-operatively (p<0.001). Of 74 patients with no depressive disorder pre-operatively, 21% develop depression by 36-months, and 35% by 60-months post-operatively (p<0.001). There was no difference in post-operative %EBWL between the pre-operative and post-operative depression groups at any time-point.

Conclusions: Considerable improvements in depression/anxiety disorder have been demonstrated post-LAGB. However, a significant proportion of patients with no relevant history develop such conditions following LAGB, independent of weight loss.

P.470 TRENDS IN OBESITY RELATED SURGICAL DISEASES IN ENGLAND AND WALES OVER A DECADE; A RETROSPECTIVE CROSS-SECTIONAL ANALYSIS.

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Background: A quarter of adults in the UK are currently classified as obese and this figure is rising steadily. This study examines the trends in both obesity and key surgical diseases linked with obesity and aims to ascertain how strongly these are associated.

Methods: Utilising HES (Hospital Episode Statistics) and PEDW (Patient Episode Database for Wales) data, over 1.5 million acute admissions for four obesity-related surgical conditions (Cholelithiasis, Diverticular disease, GORD, Acute Pancreatitis) between 2000 and 2010 were examined. The trends in these diseases were compared to the incidence of obesity in the population of England and Wales as well as to 'control' conditions. Statistical regression techniques assessed the strengths of the associations between these trends.

Results: The incidence of obesity and related surgical diseases increased consistently between 2000 and 2010. Acute admissions for obesity-related surgical disease, standardized per head of population, rose by 4.2% per annum. Individually, acute admissions for GORD rose by 6.5% per annum, acute pancreatitis by 5.2% per annum, cholelithiasis by 3.9% per annum and diverticular disease by 2.7% per annum. The incidence of acute appendicitis was static over the period, whilst the incidence of vascular disease (aortic aneurysm/ peripheral vascular disease) fell by 2.3% per annum. Obesity was strongly linked to the four obesity-related surgical conditions (Pearson's correlation coefficient 0.84).

Conclusions: The significant increases in obesity related surgical diseases are likely to continue in line with the increases in obesity. This will have profound implications for future provision of surgical services in England and Wales.

P.472 LAPAROSCOPIC REVISION OF GASTRIC BYPASS TO SLEEVE GASTRECTOMY

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Background: Gastric bypass is the most common bariatric surgery, however, long term complications, like anemia, malnutrition or stricture are frequently seen. This article reports the outcomes of laparoscopic reversion of gastric bypass (GB) to sleeve gastrectomy (SG) for long term complications.

Methods: Total 38 patients (F/M=31/7, mean age 36.5) were included, all received either Roux-en Y (n=6) or mini-gastric bypass (n=32) originally, then subsequent laparoscopic conversion was performed during October 2008 to October 2012. 28 patients were under regular follow-up. Most common reason for revision is anemia (n=13), then malnutrition (n=11), acid or bile regurgitation (n=4), GJ stricture (n=4) and excessive weight loss (n=4). In the anemia group, mean BMI and Hb was $25.5 \pm 4.6 \text{ kg/m}^2$ and $7.2 \pm 1.74 \text{ g/dL}$ at the time of revision. As for malnutrition group, mean BMI and albumin was $25.3 \pm 3.1 \text{ kg/m}^2$ and $2.38 \pm 0.4 \text{ g/dL}$. The operation included dismantling of gastrojejunostomy, restoration of gastric and intestinal continuity and SG.

Results: The mean operation time was $164 \pm 33 \text{ min}$. and mean blood loss was 65ml. There was no conversion to open surgery or mortality, six patients developed post-operative complications as wound infection, staple ulcer bleeding, stenosis of gastric tube, intra-abdominal abscess formation and two leakage. Mean hospital stay was 5.5 days. At follow-up, the mean Hb returned to $12 \pm 1.57 \text{ g/dL}$ in the anemia group and mean albumin returned to $3.9 \pm 0.4 \text{ g/dL}$ in malnutrition group. Mild weight gain was observed in malnutrition group (mean BMI from 25.3 to 27.8).

Conclusions: Laparoscopic revision of gastric bypass to sleeve gastrectomy is technically challenging, but a feasible and safe procedure. Remarkable improvement of anemia and malnutrition was observed during follow-up.

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REVERSAL OF GASTRIC BYPASS: OUR EXPERIENCE WITH 4 DIFFERENT INDICATIONS

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Background: Reversal of gastric bypass has not been reported much in literature. Few indications for reversal include severe malnutrition, stricture, inability to cope, hypoglycaemia and anaemia.

Methods: We report a case series of 4 patients who underwent reversal of gastric bypass for different indications.

Case 1: A 60 year old gentleman had gastric bypass 4 years ago, lost over 50% of EWL, developed severe hypoalbuminemia, not responded to rigorous enteral feeding.

Case 2: A 54 year old lady underwent RYGB 5 years ago, lost adequate weight. She developed a stomal ulcer perforation at 1 year and a persistent ulcer leading to stricture. Revision of gastrojejunostomy and excision of ulcer was performed, but ulcer/stricture recurred along with anaemia.

Case 3: A 58 year old gentleman had RYGB following a sleeve gastrectomy due to reflux symptoms. He had symptoms of intractable hypoglycemia following bypass not corrected with conservative methods.

Case 4: A 32 year old lady underwent RYGB abroad. Developed ischaemic bowel and fistulae, underwent multiple operations resulting in ileostomy and colostomy. Eventually she had refractory fits from deranged micronutrients and extreme weight loss reaching 32 kilograms.

Results:

Case 1 had improvement of hypoalbuminemia within 2 weeks after reversal.

Case 2 had healing of ulcer and improvement in anemia, her stricture resolved as well

Case 3 had his hypoglycemia symptoms partially resolved after reversal

Case 4 had weight gain and resolution of seizures

Conclusions:

Reversal of gastric bypass to normal anatomy is sometimes necessary to alleviate clinical problems as demonstrated in our experience.

P.481

LONG TERM OUTCOMES OF LAPAROSCOPIC SLEEVE GASTRECTOMY INTENDED FOR 2-STAGE DUODENAL SWITCH

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Background: Pyramidal Laparoscopic sleeve gastrectomy LSG is performed as first stages duodenal switch DS and second stage surgery is performed about a year later. We looked at a cohort of patients who did not proceed to have the second stage DS.

Methods: Data was collected from patients undergoing LSG intended as first stage DS from January 2008-March 2010. National Bariatric Surgery Registry, Homerton Bariatric Database and clinic letters were reviewed to obtain baseline demographics, pre-operative weight, initial BMI and weight at 1st, 2nd, 3rd and 4th year following LSG. Percentage excess weight loss (%EWL) and BMI were calculated from the above data.

Results: 113 patients under went LSG in the study period. 30 patients underwent duodenal switch as a second stage procedure and 3 patients under gastric bypass conversions; both these groups were excluded. Out of remaining 80 patients, 30 patients had follow ups only for 2 years. Therefore data from 50 patients who attended upto 4 year follow up were analysed, 20 were male and 30 were females. The mean yearly %EWL to postoperative year 4 was 49.39% (year 1); 49.55% (year 2); 49.27 (year 3) and 45.74% (year 4). The mean initial BMI of the study group was 57.05, BMI during the next 4 years were 38.74, 38.24, 38.82 and 38.14 respectively.

Conclusions: The first stage DS is pyramidal LSG, our data suggests that with only LSG, weight loss was modest and stable at 4 years which is manageable. Second stage surgery should be offered based on clinical needs and patient choice.

P.490

SPLenic ABSCESS AS A LATE COMPLICATION OF LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Laparoscopic sleeve gastrectomy (LSG), a commonly performed procedure for morbid obesity, can lead to serious complications such as enteric leak and bleeding. Splenic abscess is a rare complication of laparoscopic sleeve gastrectomy (LSG), with just one reported case in the Unites States. We herein present a case of splenic abscess after LSG.

Methods: The patient is a 24y male with BMI 61kg/m² who underwent an uncomplicated LSG. Two months postoperatively, he presented with abdominal pain and computed tomography (CT) scan demonstrated splenic laceration, possible infarct. After seventy-two hours, the patient developed fever, tachycardia and leukocytosis. Empiric broad-spectrum antibiotics were initiated for a presumed superinfection of the splenic infarct. Repeat CT scan of the abdomen demonstrated a unilocular 15x16x10cm heterogeneous subcapsular splenic collection. A splenic artery angiogram confirmed that there was no active hemorrhage. A percutaneous drainage catheter drained the collection, after which the patient showed rapid clinical improvement.

Results: The patient was discharged on antibiotics and the drainage catheter was removed two weeks later. At three-month follow-up, there is no evidence of infection.

Conclusions: Splenic abscess may progress from splenic infarction after LSG. Presentation is nonspecific, may be easily confused with enteric leak, and can be delayed. Systemic illness can rapidly progress. CT imaging is the preferred diagnostic modality, but angiography may be necessary to exclude active bleeding. In patients with a unilocular abscess, early intervention with percutaneous drainage and IV antibiotics may prevent splenectomy.

P.492

THE JOURNEY FROM A POTENTIAL KIDNEY RECIPIENT TO A KIDNEY DONOR SUBSEQUENT TO A METABOLIC SURGERY

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Introduction: Obesity along with diabetes has increased risk of kidney diseases including End Stage Renal disease (ESRD).Diabetes in an individual is an absolute contra-indication for being a kidney donor. Metabolic Surgery has brought in a novel approach in the treatment of diabetes type II (T2DM) leading to its remission and in some cases, possibly cure.

Objective :To present a unique case of a morbidly obese diabetic patient who underwent Laparoscopic Roux en Y gastric bypass (LRYGB) and two years later, was fit to be a kidney donor.

Method: A 54 yrs old male, with a BMI- 48Kg/m² and T2DM, underwent LRYGB after a complete work up. Follow up was done at 3,6,12 and 24 months.2.5 years later his son developed ESRD and was advised renal transplant. In the absence of any other suitable donor in the family the father was considered as a potential kidney donor for his son. He was extensively worked up according to the European guidelines of renal transplant (donor) and was found fit for kidney donation. He underwent donor nephrectomy subsequently.

Result: His blood sugar fasting(FBS) and glycosylated hemoglobin(HbA1C) preoperatively was 136mg% and 7.8, and at 3,6,12 and 24 months, they were 108mg%, 102mg%, 98mg%, 92mg% and 6.9, 6.7, 5.9, 5.4 respectively. Prior to donation FBS was 102.5mg% and HbA1C was 5.2.6months postoperatively, serum creatinine levels of donor was 1.2mg% and recipient was stable at 1.5mg%.

Conclusion: The LRYGB has shown to have full and durable remission of T2DM which in this case has led to the patient being medically fit to donate his kidney.

P.493

WERNICKE'S ENCEPHALOPATHY AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A CASE REPORT

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Background: Nutritional deficiencies due to bariatric surgery have been known to occur after malabsorptive procedures, but can also occur after primarily restrictive procedures such as laparoscopic sleeve gastrectomy (LSG). A deficiency in vitamin B1 (thiamine), secondary to intractable vomiting, decreased intake, or malabsorption can result in serious disorders such as Wernicke's encephalopathy. To date, only a few cases of severe vitamin B1 deficiency leading to Wernicke's encephalopathy after restrictive bariatric procedures have been reported. We herein present a case of Wernicke's encephalopathy following LSG.

Methods: A 43-year-old superobese (BMI 53 kg/m²) male underwent an uncomplicated LSG. Postoperatively, he developed hypersalivation, dysphagia, and intractable emesis. Symptoms persisted and at 10 weeks, he was found to have short-term memory loss, depression, and nystagmus. Wernicke's encephalopathy was suspected and MRI of the brain confirmed the diagnosis with bilateral enhancement of the mammillary bodies. Vitamin B1 level was low at 47 nmol/L.

Results: The patient was treated with IV thiamine and intramuscular B12 injection, and discharged on hospital day 4 with PO vitamin supplementation. Two months after discharge, his thiamine levels are within normal limits and symptoms have resolved.

Conclusions: Micronutrient deficiencies following a restrictive procedure such as LSG are rare. Patients with postoperative hyperemesis have increased susceptibility to develop thiamine deficiency and therefore neurologic monitoring and early prophylactic thiamine supplementation should be considered.

P.494

SLEEVE GASTRECTOMY

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Summary: It is described the preoperative process for the laparoscopic sleeve gastrectomy, the technique and the results. It is analyzed the results of the first forty consecutive cases at the Central Hospital of the Social Security of Asuncion, Paraguay.

Introduction: The laparoscopic vertical sleeve gastrectomy is a procedure that removes the fund and the greater curvature, leaving a small stomach approximately 150 ml.

Material and Methods: The first 40 consecutive patients undergoing sleeve gastrectomy in the Department of General Surgery of the Central Hospital, since May 7 of 2012 until August 27 of 2013. It is described the pre operative studies and pre operative medications, the operatory techniques and the post operatory evolution. The data of the placement are stored in the Electronic Medical Record.

Results: Were submitted to surgery 35 women and 5 men, with ages ranging 25 years and 58 years. The patient with the lowest weight was 85 kilos and the greatest weight 250 kilos; and with relation to the Body Mass Index the lowest was 34.7 kg/m² and the greater 82.6 kg/m²; we had 19/40 (47.5 %) patients with obesity class III, 12/40 (30 %) with super obesity. We had 1/40 surgical complications (peritonitis) and 5/40 clinical complications.

Conclusions: Laparoscopic sleeve gastrectomy is an effective method for the surgical treatment of obesity. The incidence of complications of the technique is low.

P.496

CHRONIC MESENTERIC VEIN THROMBOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Mesenteric venous thrombosis (MVT) is a rare and potentially lethal complication of laparoscopic bariatric surgery. We present the diagnosis, management and surveillance of three MVT cases after laparoscopic sleeve gastrectomy (LSG).

Methods: Three morbidly obese (BMIs 40kg/m²-52kg/m²) women between the ages 33-50 years presented with symptoms of abdominal pain after uncomplicated LSG. Symptoms presented between postoperative day 12 and 25. All patients underwent computed tomography (CT) scans and were found to have mesenteric vein thrombosis. Treatment modalities varied between warfarin anticoagulation in two patients and rivaroxaban in the third, who was resistant to heparin. One patient was positive for the prothrombin gene mutation, but hypercoagulability workup was negative for the other two patients.

Results: Repeat imaging was available for two patients at 4 and 18 months postoperatively. At 4 months, one patient developed cavernous transformation of the portal vein and upper abdominal varices. Repeat imaging in another patient demonstrated chronic SMV thrombosis at 18 months.

Conclusions: MVT can present with nonspecific abdominal symptoms after LSG. The mainstay of treatment is anticoagulation, but the duration, especially for chronic MVT, is unclear. On surveillance, two patients have chronic MVT despite anticoagulation and negative hematologic workup, which can lead to portal hypertension and its sequelae. Additional research is needed to define the incidence, symptomatology, and treatment algorithms for this rare but serious complication.

P.498

3D-MSCT GASTRIC POUCH VOLUMETRY IN BANDED GASTRIC BYPASS: PRELIMINARY CLINICAL RESULTS

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Background: Outcomes after bariatric surgery such as excess weight loss (EWL) are influenced by clinical and patho-anatomical factors like the size of the gastric pouch. The purpose of this study is to evaluate short and mid term multi-slice computed tomography (MSCT)-based volumetric assessment of gastric pouches, anastomoses and band indemnity in patients after Banded Gastric Bypass (BGB).

Methods: Prospective cohort study. Inclusion criteria: adult obese patients submitted to BGB by the same surgical team. Exclusion criteria: incomplete follow up. Primary endpoints: gastric pouch volume (GPV), gastrojejunal diameter (GJD), alimentary limb diameter (ALD) and band status 1 month, 1 year and more than 3 years after primary surgery. Secondary endpoints: clinical outcomes and demographics such as preoperative body mass index (BMIp), age, gender, excess weight loss (%EWL) according to follow up (FU).

Results: 22 patients, 16 (73%) female, mean age 37.9 (±9.6) years, mean BMIp 37.3 (± 9.6) kg/m². According to FU: after 1 month mean GPV 28.9 (± 11) cc, mean GJD 8.7(± 1.8) mm and mean ALD 33.6 (± 3.2) mm. Mean %EWL of 18.6%. 1 year after primary surgery mean GPV 25 (± 2) cc, mean GJD 9.5 (± 0.7) mm and mean ALD 26.5 (± 12) mm. Mean %EWL 89.5%. 3 or more years after primary surgery mean GPV 34 (± 7.9) cc, mean GJD 15.3 (± 6.1) mm and mean ALD 40.6 (± 9) mm. Mean %EWL 70.4 %. Band indemnity and adequate position was seen in every period of FU.

Conclusions: MSCT volumetric assessment of BGB can provide important anatomical information.

P.501

REOPERATION AFTER FAILED ADJUSTABLE GASTRIC BANDING

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Introduction: Laparoscopic adjustable gastric banding has many complications necessitating band removal. The substituted operation may be re banding, sleeve gastrectomy or Roux-en-Y gastric bypass. In this study, we reviewed the results of redo operation after band removal.

Materials and methods: Twenty six cases of failed gastric banding were enrolled in this study. Patient's body mass index ranged 33-45. In 9 cases, the band was infected. In 3 cases, the band eroded the gastric wall. Fourteen patients did not tolerate the band. In latter cases, the band removal and reoperation were done simultaneously. In 11 patients we performed sleeve gastrectomy. Fifteen cases underwent laparoscopic Roux-en-Y gastric bypass.

Results: Two cases of sleeve gastrectomy group required conversion to open approach due to massive adhesions. There was one case of leakage in sleeve gastrectomy group in stapler line under the banding site, and one case of gastrojejunostomy leakage in bypass group.

The first case underwent supportive management and fibrin glue injection into the fistula tract. The other case underwent reoperation and fistula closure.

Conclusions: Reoperation after failed gastric banding is safe and feasible. Some surgeons use another band. Others may perform sleeve gastrectomy or Roux-en-Y gastric bypass. Selecting the method is essentially based on the surgeon's experience, intra abdominal adhesions, and preference of the patients. We usually candidate the patients for Roux-en-Y gastric bypass.

P.502
CAN PRESCRIBED PROPHYLACTIC MEDICATION PREVENT MINERAL AND VITAMIN DEFICIENCY AFTER BARIATRIC SURGERY?

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Introduction: Bariatric surgery especially Roux-en-Y gastric bypass influences the absorption of vitamins and minerals. In the long term, the patients will suffer from vitamin and mineral deficiencies. Among these, iron, calcium, zinc, copper, folic acid, vitamin D3, B1, B6 and B12 are more attenuated. To prevent these deficiencies, we prescribed one capsule of Pharmaton per day. The aim of this study was to evaluate the effectiveness of one capsule of Pharmaton in preventing mineral and vitamin deficiencies after gastric bypass surgery.

Materials and methods: In 130 patients who were candidate for Roux-en-Y gastric bypass surgery the serum level of Fe, calcium, zinc, copper, folic acid, vitamin D3, B1, B6 and B12 were measured and compared before and one year after operation. All deficiencies were treated preoperatively.

Results: Iron and vitamin D3 were the most common deficiency before operation which was treated before operation. After operation, the vitamin D3 level was normal and the most common deficiency was Fe.

Conclusion: In spite of bypassing, the proximal small intestine which is the main site of vitamin and mineral absorption, it seems that one capsule of Pharmaton per day can prevent their deficiencies. Iron is the only mineral which should be extra supplemented.

P.504
INCIDENTAL BILIOPANCREATIC TWISTED LIMB DURING LAPAROSCOPIC BYPASS

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Background: Case report of a patient operated of RYGLB. It was detected an incidental twisted biliopancreatic limb during the procedure. It was resolved adequately at the OR and without complications during two years of following.

Methods: 35 years, Female, 45 BMI, without comorbidities, programmed for RYGLB as standardized technique at a Free Program for Bariatric Surgery at Rubén Leñero's Hospital, dependent of Health System of Mexico City.

We describe the RYGLB simplified technique, and also the detection of a twisted biliopancreatic limb during the visualization of the Petersen's space, after the GYA.

The surgical team decided to cut the biliopancreatic limb, right side of the patient and the GYA (proximal), for retract it through the Petersen's space and close it. The YYA was performed as normal.

Results: Two year following, the patient is asymptomatic, without complications, 89% of EWL and with adequate following of the multidisciplinary team.

Conclusions: Complications in bariatric surgery are feared for all surgeons, and several incidents during this surgeries, even in surgeons with experience, are frequent. For this reason it's very important to detect them and know the solution to resolve them in time for good evolution of patients.

P.507
EFFECT OF LAPROSCOPIC SLEEVE GASTRECTOMY ON CONTROL OF TYPE 2 DIABETES MELLITUS IN OUR SERIES

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Background: Obesity is linked with diabetes. An estimated 80% of Type 2 Diabetes is related to Obesity. The risk of diabetes increases by 4.5% for every kilogram rise in body weight. The laparoscopic sleeve gastrectomy (LSG), first described as a modification of the BPD, is emerging as a popular single-stage operation for the treatment of morbid obesity with a positive sustained effect on diabetes control as well.

Methods: All patients operated for Laparoscopic Sleeve Gastrectomy who were diagnosed cases of type 2 Diabetes preoperatively, were retrospectively followed up and their current BMI, diabetic medication usage, fasting blood glucose and HbA1c levels were documented. Remission of diabetes was defined as discontinuation of diabetic medications, concurrent with normalization of fasting glucose (<100mg/dl) and HbA1c (<=6)(ADA criteria).

Results: 36 Diabetic obese patients with average BMI 41.84 underwent Laparoscopic gastric sleeve between Jan 2012 and Sept 2014. Their average HbA1c levels reduced from 7.5 to 5.8. 75% of patients i.e. 21 out of 28 patients on Oral Hypoglycemic agents were off all medications (p=0.001). Only 1 out of 36 patients was still on insulin. 58.33% patients showed complete remission of Diabetes.

Conclusions: Laparoscopic Sleeve Gastrectomy can cause a significant and sustainable remission and improvement of Type2 Diabetes Mellitus in severe to morbidly obese patients.

P.509
PRECISE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOR CHINESE OBESE PATIENTS: 220 CASES EXPERIENCE IN A SINGLE CENTER

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Background: Laparoscopic Roux-en-Y gastric bypass (LRYGB) is a complicated procedure which may have certain complications. Precise LRYGB was introduced which modified the conventional LRYGB in order to lower the complication incidence. This study is to investigate the efficacy and safety of precise LRYGB in treatment of obesity and metabolic diseases in Chinese populations.

Methods: Clinical and follow-up data of obese patients underwent precise LRYGB in our department between 2011 and 2014 were analyzed retrospectively.

Results: A total of 220 obese patients were included in this study. All the precise LRYGB procedures were successfully performed with no conversion to open surgery or death cases. Average operation time was (127±20.1) minutes, postoperative hospital stay was (5.1±1.3) days. No severe complications was observed. Percentage of excess weight loss in 1, 3, 6, and 12 month after operation was (27.5±7.8)%, (55.6±7.9)%, (76.2±7.8)%, (82.6±8.9)%, respectively. The improvement rate of co-morbidities such as fatty liver, hyperlipidemia, hypertension and type 2 diabetes mellitus were 88.6%, 91.6%, 74.6% and 83.5%, respectively.

Conclusions: Precise LRYGB modified and optimized the conventional surgical techniques which are not significantly increasing the operation time. It is safe and feasible. The postoperative weight loss effect is significant and it can effectively improve the related co-morbidities in lower complication incidence, when compared with conventional LRYGB.

P.511
MANAGEMENT OF LEAK AFTER SLEEVE GASTRECTOMY

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Introduction:

Leaks after sleeve gastrectomy is one of the most dreaded complications. The morbidity of the patient increases many folds with long hospital stays, has to undergo multiple procedures, and the cost of patient goes very high. It is a big financial and mental burden on the patient, health system and the operating surgeon.

Objectives:

Discussing management of a case of leak post Sleeve Gastrectomy using fully coated long Mega stent.

Methods:

An Asian male aged 26 years having a BMI of 48.3 with no co-morbidities underwent laparoscopic Sleeve Gastrectomy at our centre as per the guidelines.

Patient complained of Fever on the 10th post-operative day. On evaluation was found to have raised blood counts (21,00/cmm). Patient was subjected to Oral Contrast CT Scan which did not show any leakage of dye but showed a large collection lateral to the staple line. CT guided aspiration of the collection was attempted but patient developed hemothorax on the left side and an urgent Inter costal drainage tube was inserted to drain the blood. Attempt to drain the collection laparoscopically was not possible due to dense adhesions and proximity of vital organs. So open laparotomy was done and the collection was completely drained. Naso jejunal tube was kept for the feeding.

On the 5th post operative day drain showed bile in it. Urgent endoscopy was done and site of leak was identified and Fully coated long Mega stent was placed with Naso jejunal tube was placed to continue the feeding.

Results:

Stent was removed after 8 weeks and fistula site was completely healed.

Conclusion:

Leaks after sleeve gastrectomy are very difficult to manage and require multi-disciplinary approach. Intraabdominal lavage and drainage of collection with Placement of Mega stent fully coated ones is an appropriate method for management of gastric leaks

P.520

IMPROVED RENAL FUNCTION 1 YEAR AFTER BARIATRIC SURGERY

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Background: Morbid obesity is related with impaired renal function. And bariatric surgery has shown to be associated with an improvement of the renal function. However, little is reported about the potential benefit of bariatric surgery on renal function in Korea. We therefore studied the obesity-related renal functional changes 1 year after surgery.

Methods: From December 2011 to February 2014, 459 consecutive patients who met the criteria, body mass index ≥ 35 or ≥ 30 with weight-related co-morbidities underwent bariatric surgery. The exclusion criteria were as follows: revisional operation, CKD \geq Stage 3, macroalbuminuria, nephrotic range proteinuria and absence of laboratory data of renal function. Preoperative and postoperative (1-year) renal function was evaluated by estimated glomerular filtration rate (MDRD), urinary albumin-to-creatinine ration and urinary protein-to-creatinine ratio.

Results: 136 patients met the criteria. Among them, 126(92.6%) patients underwent RYGB, females were 101(74.3%) and mean age was 35.9 ± 11.2 years. Between preoperative and postoperative values, a significant reduction was observed in UACR (27.4 ± 47.5 vs 9.0 ± 8.6 mg/g; $p < 0.001$). Especially, in the patients who underwent RYGB or had diabetes/ hypertension, the reduction was significant. (RYGB, $p < 0.001$; DM, $p = 0.001$; HTN, $p = 0.024$) Microalbuminuria was present in 22.1% preoperatively, decreasing to 4.4% 1-year postoperatively.

Conclusions: In morbid obese patients, bariatric surgery improves the microalbuminuria and normalizes the UACR.

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SEX LIFE AFTER BARIATRIC SURGERY

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Introduction: Sex life of obese patients is affected frequently.

Objective: Evaluate the effect of bariatric surgeries in sex life in obese patients, operated in the border city of Tijuana, Mexico

Methods: A group of 34 patients with BMI > 36 % from US aged 30 and more were selected in different private hospitals from Tijuana through a simple random method. Every patient answered a questionnaire that measured sociodemographic aspects and physical and emotional wellbeing.

Results: Participants in the study were 34 obese patients underwent laparoscopic sleeve gastrectomy LSG. Average 40.2 years SD 8.07; 82 % were married, two thirds were women, 80 per cent improved your social interaction, and more than half of these patients increase your sexual activity per week and improved your sex life (CI 95% $p < 0.05$). Two thirds were satisfied with all aspects of your life. Excessive body weight loss EBWL at 3rd, 6th and 13 month was 28%, 46% and 74 % respectively $p < 0.002$. One third patients

underwent conversion gastric band to LSG and one patient of this showed gastric leak that was resolved by endoscopy and placement of titanium staples.

Conclusions: Sex life decrease in patients with morbid obesity. Foreign obese patients underwent LSG improvement significant your sex life and frequency of sexual activity even your social interaction.

P.523
SINGLE ANASTOMOSIS GASTRIC BYPASS: INITIAL EXPERIENCE AT A FREE GOVERNMENT PROGRAM OF BARIATRIC SURGERY AT MEXICO CITY

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Background: The aim of this study is to evaluate the factibility and success to perform Single Anastomosis Gastric Bypass (SAGB) in obese patients at a Bariatric Center at Mexico City in a free government program.

Methods: Prospective, longitudinal and descriptive study that evaluates the initial experience with SAGB at a free government Program for Bariatric Surgery at Rubén Leñero's Hospital, dependent of a Health System Government at Mexico City.

Results: 24 patients of 1250 bariatric surgeries in 5 years performed SAGB, mean age 41.9 (22-58), IMC 45.3 (35.8 – 50.34), following at 6 months, adequate EWL at 3 months 67.4 to 106.6%.

Rate of complications 33.3%, 3 stenosis (12.5%) two required reoperation. 2 fistulas (8.3%), one required reoperation, 1 bleeding (4%) and 1 biliar reflux (4%) controlled conservative. Mortality was 0%.

Conclusions: Each time there are more and new techniques to treat morbid Obesity searching major succesfull with EWL and the control of comorbidities. Our initial experience with SAGB result in high risk of complications. It was requiered a major learning curve and the standarization of this technique for continue this study.

P.526
INTERNAL LOCUS OF CONTROL IN POSTOPERATE OBESE PATIENTS

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Introduction: Locus of control refers to the extent to which individuals believe they can control events affecting them. Individuals with a strong internal locus of control believe events in their life derive primarily from their own actions. This psychologist construct is useful in obese patient's evaluation.

Objective: Evaluate the internal locus of control in obese patients operated in the border city of Tijuana, Mexico.

Methods: a group of 34 patients with BMI > 36 % from US aged 30 and more were selected in different private hospitals from Tijuana through a simple random method. Every patient answered a questionnaire that measured sociodemographic aspects and physical and emotional wellbeing.

Results: Participants in the study were 34 obese patients underwent laparoscopic sleeve gastrectomy LSG. Average 40.2 years SD 8.07; 82 % were married, two thirds were women, 80 per cent improved your social interaction. Internal locus of control was significant in these patients (CI 95% p < 0.05). Two thirds were satisfied with all aspects of your life. Excessive body weight loss EBWL at 3rd, 6th and 13 month was 28%, 46% and 74 % respectively p < 0.002. One third patients underwent conversion gastric band to LSG and one patient of this showed gastric leak that was resolved by endoscopy and placement of titanium staples.

Conclusions: Internal locus of control is one psychologist construct useful in obese patient's evaluation. One strong internal locus of control can improve the short and long term bariatric surgeries results and promote compliance with treatment, diet and healthy lifestyles

ROUX-EN-Y GASTRIC BYPASS PRODUCES SUPERIOR 2-YEAR WEIGHT-LOSS OUTCOMES COMPARED TO SLEEVE GASTRECTOMY IN SEVERELY OBESE PATIENTS WITH TYPE 2 DIABETES: RESULTS FROM A SINGLE-CENTRE

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Background: Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) are the two most common bariatric procedures undertaken worldwide. Post-operative weight loss outcomes are variable with some patients experiencing less than 10% weight loss (%WL) at two years post-surgery. Patients with type 2 diabetes mellitus (T2D) have been reported to exhibit reduced weight loss post-RYGB. However, there are few data comparing the weight loss outcome following SG and RYGB in severely obese patients with T2D. Thus, we aimed to compare weight loss (%WL) in a cohort of T2D patients who underwent either RYGB or SG.

Methods: We undertook a retrospective cross-sectional study of adult patients with severe obesity and T2D who underwent either RYGB or SG as a primary procedure between 2007 and 2013 at a single centre. 239 patients, RYGB (n = 114) and SG (n = 115), with 2-year follow-up available were included. Mean %WL at 1- and 2- years post-surgery were compared between groups (t-test). The number of patients achieving less than 10% WL at 2 years were identified and compared (chi-sq test). Between group differences were subjected to further multi variable adjustment analysis against potential confounders: age, sex, ethnicity, pre-operative BMI, and HbA1c.

Results: Pre-operatively SG patients had a higher BMI (48.5±7.6 kg/m² vs. 43.0±5.7 kg/m², p<0.001) and lower HbA1c (7.3±1.4 vs. 8.0±1.0, p<0.001) compared to RYGB patients. Both groups were similar with respect to age, gender and ethnicity. At 1-yr post-surgery %WL was higher in RYGB group compared to SG group (29.5±7.6 vs. 24.9±9.0 p<0.001; mean difference 4.6±1.1%). At two years post-surgery %WL continued to be significantly greater in the RYGB compared to the SG group (28.8±9.1 vs. 23.7±10.4, p<0.001; mean difference 5.0±1.3%). At 2 years post-surgery only 1 patient in the RYGB had a %WL < 10% compared to 11 in the SG group (incident rates 0.9% vs. 9.6%, p<0.01). These differences remain statistically significant after correction for pre-surgery BMI, HbA1c, age, gender, and ethnicity.

Conclusions: In our single centre study severely obese patients with T2D who underwent RYGB achieved greater %WL at 1 and 2 years post-surgery compared to those who underwent SG after correction for pre-operative factors. These results are in accord with early (3 year) findings from the STAMPEDE trial. Randomised controlled studies comparing the long-term weight loss outcomes from RYGB and SG are required.

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SELF-REPORTED HEALTH. A PARAMETER FOR EVALUATING BARIATRIC SURGERIES

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Introduction: Self-reported current health status is a good predictor of future disability, hospitalization and mortality

Objective: Evaluate the Self-reported current health status in postoperative obese patients.

Methods: A group of 34 patients with BMI > 36 % from US aged from 30 to 54 years old were selected in different private hospitals from the border city of Tijuana, Mexico; through a simple random method. Every patient answered a questionnaire that measured sociodemographic aspects and physical and emotional wellbeing.

Results: Participants in the study were 34 obese patients underwent laparoscopic sleeve gastrectomy LSG. Average 40.2 years; almost all were married, two thirds were women; Self-reported current health status was significant in these postoperative patients (CI 95% p < 0.05) and consistent with the excessive body weight loss EBWL and regression of comorbidities. Two thirds were satisfied with all aspects of your life. EBWL at 3rd, 6th and 13 month was 28%, 46% and 74 % respectively p < 0.002.

Conclusions: Self-reported current health status is a good predictor in postoperative obese patients in short and long term and is useful in the follow up of this kind of patients.

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HAS SLEEVE GASTRECTOMY AFTER FAILED GASTRIC BANDING SAME RESULTS THAN RIMARY SLEEVE GASTRECTOMY?

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Introduction : Several long-term studies have shown that laparoscopic adjustable gastric banding (LAGB) is associated with a high rate of weight loss failure and complications requiring its removal. The laparoscopic sleeve gastrectomy (LSG) is increasingly being performed as rescue procedure after LAGB failure.

Objective: To compare the outcomes of LSG as rescue procedure after LAGB failure to primary LSG in a large population of patients.

Methods: We retrospectively reviewed of our prospectively collected data on consecutive LSG between January 2009 and January 2014. Outcome measures included mortality, postoperative complications and weight loss results. LSG success was defined as percentage of excess weight loss (% EWL) > 50%.

Results: The primary LSG group (PG) contained 498 patients and the LSG conversion group (CG) contained 96 patients. All the conversions to LSG were performed in two steps. Mortality was 0 in both groups. The rate of postoperative complications was 6.4% in the PG and 5.2% in the CG ($p=ns$). Leak rate was 3.2% and 1%, respectively, in the PG and CG ($p=ns$). The mean %EWL at 2 and 5 years was 72.5% and 62.7% in the PG and 65.2% and 52.1% in the CG ($p=ns$). Conversely, at 2 and 5 years, the failure rate was 14.3% and 14.8% in the PG and 42% and 52% in CG ($p<0.05$).

Conclusion: Conversion of failed LAGB to LSG is a safe and effective procedure, but with worst weight loss results compared to primary LSG.

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VITAMIN B12 DEFICIENCY AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Laparoscopic sleeve gastrectomy (LSG) and Roux-en-Y gastric bypass (RYGB), the two most common bariatric procedures, produce similar weight loss and metabolic outcomes. Parenteral vitamin B12 (Vit B12) supplementation is often recommended post-RYGB. Nutritional deficiencies following LSG are thought to be less of a concern than after RYGB. However, there are few data examining Vit B12 pre- and post-LSG.

Methods: A longitudinal observational study in a large bariatric centre examined Vit B12 levels preoperatively and at 6- and 12-months post-LSG in adult patients. Electronic patient data records were examined for all patients who underwent bariatric surgery between October 2007 and December 2013. Inclusion criteria were: LSG as primary procedure, patients with pre-operative and 12-months post-LSG Vit B12 data. Baseline demographics of age, sex and body mass index (BMI) were recorded. From October 2007 to December 2011 Vit B12 supplementation was not routinely administered unless a specific deficiency was demonstrated before or after surgery. From January 2012 onwards patients routinely received an oral multivitamin (MV) containing 3mg Vit B12. Vit B12 deficiency was defined as less than 191 picograms per millilitre according to local laboratory reference ranges.

Results: 310 patients fulfilling the inclusion criteria were identified. 237 women and 73 men aged (mean \pm standard deviation) 44.7 ± 11.0 years and BMI 49.5 ± 8.8 kg/m². The mean percentage weight loss at 12 months was $25.5 \pm 9.2\%$. Pre-surgery 21 patients were treated with intramuscular Vit B12; of the remaining 289, 32 were Vit B12 deficient (11.0%). 6-months post-LSG data were available on 280 of the cohort, of these 45 patients had previously been identified as Vit B12 deficient and treated. Of the remaining 235 patients, 3 out of 77 (4.0%) on oral MV became deficient and 5 out of 158 (3.2%) non-supplemented patients became deficient. At 12 months post-LSG there were only 3 *de novo* cases of Vit B12 deficiency, 1 in the MV group and 2 in the non-supplemented group.

Conclusions: One in 10 bariatric patients had Vit B12 deficiency pre-operatively highlighting the importance of preoperative nutritional assessment. *De novo* Vit B12 deficiency developed in only a small percentage of post-LSG patients and this was not modified by oral MV supplementation. Our data suggest that routine parenteral Vit B12 administration is not warranted but that regular monitoring is required.

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PREDICTORS OF WEIGHT LOSS AND SUCCESS FOLLOWING GASTRIC BYPASS IN A PUBLIC UNIVERSITY HOSPITAL: A COHORT STUDY

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Background: Weight loss after bariatric surgery varies and depends on many factors, such as time elapsed since surgery, baseline weight, and co-morbidities.

Methods: We analyzed weight data from 297 patients who underwent open Roux-en-Y gastric bypass (RYGBP) at an academic institution between November 2008 and October 2013. Generalized Estimating Equations (GEE) analysis was performed to identify factors in predicting % excess weight loss (%EWL) at 6 months, 1 year and 02 years after surgery.

Results:

Mean patient age at time of surgery was 43,6 (SD), and the majority was female (85.97%). Baseline BMI was 48,9 kg/m(2). The female had a statistically significant relationship with %BWL compared to the male sex ($p<0.1$). The presence of asthma, OSA, smoking and dyslipidemia was inversely associated with %BWL ($p<0.1$). Six months after surgery, 56.2% of the patients have lost more than 50% of their initial weight. Two years after surgery, 87.6% of those who returned, weighed below 50%

Conclusions: Weight loss with Gastric bypass in the sample studied was more than 50% of the excess weight in 87.6% of the patients during a 2-year period. The predictive factors inversely related to weight loss were obstructive sleep apnea, asthma and dyslipidemia. The predictive factor directly involved in weight loss was being female.

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30 DAY READMISSION POST BARIATRIC SURGERY- A REVIEW OF 1466 PATIENTS AT A TERTIARY REFERRAL HOSPITAL

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Max Healthcare

Background: Bariatric surgery today is the modality of choice for management of morbid obesity and associated metabolic co morbidities like DM type II. Early readmission after bariatric surgery leads to increased morbidity and increased cost of bariatric surgery. We reviewed our experience to assess 30 days readmission in patients undergoing bariatric surgery in our tertiary referral centre over 7 years.

Methods: A retrospective review of our prospectively maintained database of patients undergoing bariatric surgery between Jan 2008 – Dec 2014. The records of all 30days hospital readmission of patients who underwent bariatric surgery were reviewed. Patient demographics, previous surgery (LRYGB / LSG), reason for readmission, hospital stay and subsequent course in hospital were obtained and analyzed.

Results: Overall, 30 days readmission rate was 1.9% (28 / 1466 patients). Of these 28 readmissions, 21 patients (75%) had LRYGB and 7 patients (25%) had LSG. Readmitted patients included 13 males and 15 females with mean initial BMI of 48.5kg/m2 (Range 34.7 – 66.1kg/m2). 17 / 28 patients presented with surgery related complications (intra abdominal collection in 2 patients, surgical site infection in 3 patients, bleeding related complication in 4 patients, postoperative hernias in 3 patients, anastamotic leak in 3 patients and abdominal pain in 2 patients). Eight of these patients were managed conservatively and 9 patients required surgery. 11 / 28 patients were readmitted with non surgery related problems. 3 patients required ICU admission. The mean length of hospital stay after readmission was 5.6 days (Range 1 to 49 days). One patient expired from sepsis after anastamotic leak.

Conclusions: This study reported an overall 30 days readmission rate of 1.9 %. The early postoperative morbidity and mortality after bariatric surgery is low.

P.544
SURVEY ON TECHNICAL ASPECTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AT IFSO WORLD CONGRESS 2014- AN INTERNATIONAL SNAPSHOT

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Background: Laparoscopic sleeve gastrectomy has gained popularity as a primary procedure for morbid obesity, however no UK technical guidelines exist. The objective was to ascertain variations in intraoperative techniques amongst international bariatric surgeons.

Methods: A questionnaire enquiring about the technical aspects of the procedure was circulated among surgeons at the 19th World IFSO Congress.

Results: 119 responses were received. 66% (n=79) routinely explored for a hiatus hernia. 67% (n= 80) fixed hernia's that were found intra-operatively and continued with a sleeve gastrectomy, 9% (n= 11) changed to gastric bypass. 24% (n=28) did not answer. 92% (n=109) used a bougie, 5% (n=6) used a midsleeve tube and 3% (4) did not answer. 87% (n=102) used a bougie ranging between 32F and 38F, 13% (n=15) opted for a bougie above 40F and 2 did not specify. Resection distances from the pylorus ranged from 2 to 10cm, average distance was 6cms. 75% (n=88) left between 4 and 5cms, 7% (n=8) resected from 7cm and 12% (n=15) from 2cm from the

pylorus, 7% (8) surgeons did not specify a distance. 34% (n=40) of surgeons did not re-inforce the staple line. 48% (n= 57) chose to oversee the staple line, 16% (n=19) used a biological method of staple line enforcement. 2% (3) did not answer the question.

Conclusions: There are large variations in the intraoperative techniques amongst surgeons in the international bariatric community. A standardised approach regarding the technical aspects of the procedure needs to be adopted to enable comparison of patient outcomes.

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PROSPECTIVE EVALUATION OF IMPACT OF MINI-GASTRIC BYPASS (MGB) ON INDIAN OBESE, WITH SEVERE UNCONTROLLED DIABETES MELLITUS (DM) AND METABOLIC SYNDROME.

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Background: Though MGB is becoming popular in Asian region, the data on its effect on severe diabetes is scarce.

Methods: 23 patients, with diabetes duration >8years &/or on Insulin, with metabolic syndrome, HbA1c > 8 %, c. peptide between 1 to 3 ng/ml, BMI 30 to 63 kgs/m², who underwent MGB between jan 2012 to june 2013, were prospectively evaluated for BMI, HbA1c, Lipids and hypertension , at baseline and at 1 year.
Remission defined as per ADA guidelines.

Results: The mean age was 44 years and M:F 14:9. The BMI, Duration of DM, Blood pressure, Cholesterol, Triglycerides were 41 kgs/m², 9.5 years, 156/94 mm of Hg, 248 mg/dl and 210 mg/dl at baseline and at 1 year 30.74 kgs/m², 128/82 mm of Hg, 170 mg/dl and 162 mg/dl.

10 of the 23, on Oral Hypoglycemic drugs had remission and 10/13 who were on Insulin had remission. The %EBMIL at one year was 64.95%.

Remission correlated with insulin usage and duration of DM. Blood pressure lowered in all with reduced medication. Lipids lowered in all without use of medications. There were no deaths or leaks.

One patient had a marginal ulcer, one had a remnant gastric perforation and 3 other had minor complications.

Conclusion: MGB is effective in the treatment of severe DM in obese Indian patients. However safety and long term impact in comparison with standard procedures needs to be evaluated

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SHORT-TERM FOLLOW-UP AFTER LOOP DJB WITH SLEEVE AS METABOLIC PROCEDURE

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Content: Introduction: In recent years metabolic procedures has emerged as another modality of carrying out the bariatric procedure for non-obese diabetics. We applied Loop DJB with Sleeve Gastrectomy (DJB-S) as a metabolic surgical technique for a select number of patients with uncontrolled diabetes on insulin enrolled into our metabolic surgery program.

Objectives: To evaluate the short-term outcome of Loop DJB-S with regards to resolution of diabetes.

Methods: We analyzed 4 cases (2 male and 2 female) of Loop DJB performed between November 2013 and March 2014 with short-term follow-up period of 1 year. Patients had a mean BMI of 27.8 kg/m² (26.2 kg/m² – 29.4kg/m²). Laparoscopy was performed through a four-port approach. A modified loose sleeve with an anti-colic side-to-side hand-sewn loop DJB was performed with a biliopancreatic limb length of 200 cm in all patients. Remission of T2DM was defined as glycated hemoglobin (HbA1c) < 6.5% and fasting plasma glucose 100 mg/dl in the absence of treatment.

Results: The mean operation time was 108.2 min. There was no post-operative complication. The patients were discharged after 2.1 days. One year postoperatively, HbA1c was 5.4±0.4% and mean BMI was 23.6 kg/m² for the whole cohort and remained stable during follow-up. The cumulative 1 year remission of T2DM was 75% with 100% not needing insulin.

Conclusion: DJB-S is an effective treatment for non-obese T2DM patients and should be considered before disease progression.

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LAPAROSCOPIC MINI GASTRIC BYPASS(LMGB) HAS A SHORT SURGICAL LEARNING CURVE. A SINGLE UNIT EXPERIENCE

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Background: Laparoscopic bariatric surgery needs advanced skills. Roux-en-Y Gastric bypass(LRYGB) is the gold standard procedure worldwide. There has been increasing uptake of LMGB worldwide, but that in Europe is slow mired by the controversies surrounding it. Our unit has performed 150 LMGB since first procedure performed in October 2012. We analyzed the operative time needed by different bariatric surgeons in a single unit, who are already performing LRYGB, for performing LMGB.

Methods: The first 3 procedures performed by expert from other Unit were excluded. Of the 147 procedures performed, operative time data was available for initial 132 consecutive cases from the hospital computer record.

Results: 6 different consultants performed 21, 32, 36, 23, 15 and 5 procedures respectively. The mean operative time(MOT) was 76.52, 102.88, 86.08, 98.47, 84.73 and 108.8minutes(m) respectively. The MOT for all the procedures was 92.9m. Rutledge et al in his series of 2410 patients had MOT of 37.5minutes. Noun et al has MOT of 89m(1000 patients). Lee et al has MOT 112.2m(820patients). Piazza et al had MOT of 120m(197patients). Carbajo et al had MOT of 93m(209 patients). The post-operative leak rate and mortality rate in our cohort was 0%. The patient characteristics, comorbidities and total body weight loss were comparable to literature.

Conclusions: Surgeons already performing other bariatric procedures can quickly master this safe procedure which has one less anastomosis with a short learning curve and shorter operative time. We assume that learning curve for MGB would be fewer cases than that for RYGB.

P.553 ANTI-PERISTALTIC INTUSSUSCEPTION: A RARE COMPLICATION AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB)

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Background: Internal hernia is a common complication following LRYGB surgery. Literature quotes 1-9% of LRYGB patients develop internal herniation through Petersen's or mesenteric defect. Delay in recognizing this problem has the risk of strangulation of bowel and increase in morbidity and mortality of the patients. To our knowledge intussusception combined with internal herniation is not reported in literature.

Objective: Our aim is to increase the awareness among all emergency specialty teams to this rare presentation following LRYGB.

Results: A 38 year old female, 28 months post LRYGB weighing 80kgs (Initially 191kgs), presented to a neighbouring surgical unit with abdominal pain and vomiting. Her MEWS was 0. Initial bloods were within the normal range, AXR showed dilated small bowel, CT suggested intussusception at the jejuno-jejunal (JJ) anastomosis. At laparotomy the common limb had intussuscepted into the alimentary limb obstructing the JJ anastomosis. The common limb had also herniated through the meso-mesenteric defect. Approximately 80 cm of non-viable small bowel required resection. The patient made satisfactory postoperative recovery and was discharged 6 days post operatively. Her histology has confirmed intestinal ischaemia secondary to intussusception.

Conclusions: Internal herniations via the mesenteric or Petersen's defect are known complications following LRYGB. Antiperistaltic intussusception of the common limb into the alimentary limb combined with an internal herniation via the mesenteric defect is an unheard of complication. Doctors need to be aware of this serious pathology having a low threshold for seeking bariatric surgical intervention. This can prevent life threatening bowel ischaemia.

P.554 LAPAROSCOPIC MINI GASTRIC BYPASS (LMGB): A SINGLE CENTRE UK EXPERIENCE.

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Background: MGB first reported in 2001 has a slow uptake in UK bariatric society. Our unit is the first unit within the National Health Service of United Kingdom performing this procedure. The aim of this study was to present our experience with first 132 LMGB.

Methods: We retrospectively analysed our prospectively collected data of first consecutive 132 LMGB procedures performed in a single centre in the UK since Oct 2012.

Results: 70.4% patients were female. The mean age was 45 years. The mean weight at presentation to bariatric unit was 134.8kgs and mean BMI of 48.1kg/m². Thirteen patients had prior gastric balloon insertion and 1 had previous sleeve gastrectomy. 24% had diabetes mellitus and 32.5% had hypertension. The average post-operative stay was 3.4 days. 2 patients had early complications (1 pt:Wound infection treated with antibiotics, leading to colitis, 2nd pt: wound haematoma). Post-operative leak rate was 0%. Eight (6%) patients had readmission. Four patients developed post-operative marginal ulcer. 1 patient needed early reoperation (pelvic small bowel adhesions), 3 patients required long-term (>30 day) reoperation (1=marginal ulcer perforation, 2=diagnostic laparoscopy). %Excess

weight loss(%EWL) at 6 weeks, 6 months, 12, 18 and 24 months was 40.8%(n=32), 61.1%(n=79), 80.4%(n=50), 82.7%(n=27) and 99%(n=4). The 30 day mortality was 0%.

Conclusions: Our results are comparable to those published in literature. We consider MGB to be safe and effective operation. The weight loss was good. The marginal ulcer rate and reoperation rate was lower than that published in literature. Long term results are awaited.

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BARIATRIC SURGERY IN ELDERLY PATIENTS: SURGICAL RESULTS

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Introduction: In the last 20 years, the population over 60 years old in Brazil has grown. Since this population is increasing, the decision of operating these patients is becoming a frequent concern and a big challenge for bariatric surgeons. Surgery related morbidity and mortality is one of the big issues of this matter.

Aim and method: The aim of this study was to access the morbidity and mortality of surgical treatment of obesity in a group of patients over 60 who have been submitted to bariatric surgery between January 2003 and December 2014. 47 patients have been retrospectively analyzed. We analyzed the incidence of morbidity and mortality, improvement on metabolic syndrome and nutritional status after surgery

Results: 42 patients (89%) were women. Mean follow up 62 months (12 - 144). 42 patients were submitted to gastric bypass and 5 to sleeve gastrectomy. Mean body mass index (BMI) pre operator: 49.6Kg/m². Mean pos operator BMI: 34.9, %EWL: 71.8. Mortality were 8.5% (1 pneumonia, 1 wound infection, 1 Wernicke Syndrome and 1 Cerebral tumor). Two patients (4.2%) had fistula. Improvement were seen in diabetes (pre x pos): (55.3 x 12.8%); HbA1c: (7.2 x 6.0); glucose (237 x 112). Hypertension (89.3 x 44.7%). Dyslipidemia (38.4 x 19.2%). Nutritional status was preserved, albumina (pre: 4.1 x pos: 4.1); Hemoglobin (13.7 x 13.2).

Conclusion: Bariatric surgery in elderly obese patients benefits in terms of weight loss and metabolic syndrome improvement, although had higher mortality.

P.557

THE EFFECTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY: MID-TERM OUTCOMES

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Background: Bariatric surgery is an increasingly popular and effective treatment for obesity. Malabsorptive procedures such as bypass have been found to be associated with significant bone loss. However, little is known about the effects of a relatively new procedure, sleeve gastrectomy, on the effects of bone metabolism

Methods: This is a retrospective analysis of a prospectively maintained database of 127 patients who underwent laparoscopic sleeve gastrectomy in a single institution from January 2012 to December 2013. Patients' characteristics and baseline blood results and bone density were obtained before operation and at six- & twelve-months post operatively.

Results: The mean age was 37.3 years (range 18 to 66) with a slight female predominance (56%) and majority (67.7%) were Chinese & Malay. The baseline BMI was 42.2 kg/m² (range 31-64). Pre-operatively, none of the patients were osteoporotic. Bone mineral density showed mean hip t-score of 1.1 (range -1.2 to 4) & z-score of 1.5 (range -0.3 to 4.5) and mean lumbar t-score of 1.2 (range -1.3 to 3.8) & z-score of 1.4 (range -1.3 to 4). The baseline albumin, calcium, phosphate and parathyroid hormone levels were normal and continued to remain normal post-operatively. However, 30.7% of the patients had vitamin D deficiency pre-operatively. This was reduced to 2.3% at six- and twelve-months postoperatively, likely due to routine postoperative supplementation. On subgroup analysis, patients with BMI ≥ 50kg/m² are more likely to have vitamin D deficiency pre-operatively (47.6%) as compared to those with BMI 40-49 kg/m² (29.6%) and BMI 30-39 kg/m² (25.5%).

Conclusions: A large proportion of patients had vitamin D deficiency pre-operatively despite living in a tropical country. This can be a result of relative lack of physical activity in this group of patients which is further evident in the subgroup analysis where patients with BMI ≥ 50kg/m² are much more likely to have vitamin D deficiency compared to those with lesser BMI. However, there is little effect on calcium, parathyroid or bone density despite the presence of vitamin D deficiency.

P.564

PREVALENCE AND PREDICTORS OF NON-ALCOHOLIC FATTY LIVER DISEASE IN MORBIDLY OBESE SOUTH INDIAN PATIENTS UNDERGOING BARIATRIC SURGERY

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Background and Aims: Numerous studies worldwide have identified a high prevalence of non-alcoholic fatty liver disease (NAFLD) among morbidly obese subjects. Several predictors have been found to be associated with NAFLD and its histological high risk components. Similar data from India is lacking. We aimed to determine the prevalence and the predictors of NAFLD and its histological high risk components in a cohort of Indians with morbid obesity undergoing bariatric surgery. Safety of a routine intraoperative liver biopsy was also assessed.

Patients and methods: There were 134 morbidly obese patients who underwent bariatric surgery with concomitant liver biopsy. These were assessed for NAFLD and its histological high risk components. Clinical, biochemical and histological features were evaluated and predictors of NAFLD, NASH, fibrosis and advanced fibrosis were identified.

Results: Mean BMI was 44.66 ± 9.81 . Eighty-eight (65.7%) showed NAFLD. Forty five (33.6 %) showed NASH and 42 (31.3%) showed fibrosis both not mutually exclusive. Nineteen (14.1%) showed advanced fibrosis. Higher alanine aminotransferase (ALT) independently predicted NAFLD and was significantly associated with NASH and fibrosis. Type 2 Diabetes mellitus (T2DM) and the metabolic syndrome was significantly associated with fibrosis. Systemic hypertension (HT) independently predicted NASH and fibrosis. There were no intraoperative or postoperative complications related to the liver biopsy.

Conclusion: NAFLD has a high prevalence among morbidly obese patients. Raised ALT, HT, T2DM and the metabolic syndrome are predictors for NAFLD and its high risk histological components. Routine intraoperative liver biopsy is safe in morbidly obese undergoing bariatric surgery for diagnosing NAFLD.

P.569 **THE EFFECTS OF ORAL ANTIDIABETIC DRUG METFORMIN ON LIVER METABOLISM BY REAL-TIME CELL MONITORING SYSTEM**

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Introduction: Type 2 diabetes mellitus is associated with various diseases. Metformin is known to restrict hepatic gluconeogenesis and reduces glycogenolysis.

Objectives: The study was investigated for the proliferative capacity of AML12 hepatocytes by continuous monitoring assay (iCELLigence system) to investigate cytotoxicity of oral antidiabetic drug metformin.

Methods: iCELLigence cell index (CI) impedance measurements were performed in AML12 hepatocyte cell line after resuspended in medium and adjusted to subsequently 100.000 cells/mL. After seeding 150µL of the cell suspensions into the wells of the E-plate L8, AML12 cells were monitored every 15 min for a period of up to 96h by the iCELLigence system.

Results: Half maximum inhibitory concentrations (IC50) were determined based on the dose–response curves derived by iCELLigence measurements. IC50 values for 24h metformin exposed AML12 hepatocytes were $1.70 \times 10^{-2} \text{M}$ after 24h metformin administration which demonstrate the therapeutic effect of metformin at $1.70 \times 10^{-2} \text{M}$ concentration after 24h is prominent in hepatocytes.

Conclusion: In conclusion, the $1.70 \times 10^{-2} \text{M}$ dose of metformin by iCELLigence system, may be used in diabetic patients to benefit from the drug without damaging the liver.

P.570 **BARIATRIC SURGERY IMPROVES THE SOLUBLE LECTIN-LIKE OXIDIZED LDL RECEPTOR-1 AS A POSSIBLE MEDIATOR OF ENDOTHELIAL DYSFUNCTION**

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Background: Morbid obesity is a serious health problem worldwide. Surgery has been proven to be the only effective method for treating morbid obesity. Oxidized low-density lipoprotein (oxLDL) and soluble lectin-like oxidized LDL receptor-1 (sLOX-1) have been shown to be related to the pathogenesis of atherosclerosis and obesity. The purpose of this study was to evaluate the relationship between the weight loss induced in morbidly obese subjects by laparoscopic sleeve gastrectomy (LSG) and the change in serum oxLDL and sLOX-1 levels.

Methods: Twenty patients who have undergone LSG due to morbid obesity and a control group of 20 healthy volunteers were enrolled. We obtained blood samples from the study subjects, preoperatively, one month and six months after the surgery, and once from the control group. Samples have been evaluated by ELISA method.

Results: Six months after the operation, a significant weight loss was achieved in the surgery group. The morbidly obese patients had significantly higher levels of oxLDL and sLOX-1 compared with the control subjects. A positive correlation was found between the levels of oxLDL and BMI. oxLDL and sLOX-1 levels decreased one month and six months after surgery ($P < 0.005$).

Conclusion: The weight loss induced by bariatric surgery improves endothelial damage by reducing levels of oxLDL and LOX-1. The fall in fasting lipid profile is associated with an improvement of insulin resistance, while the reduction of endothelial damage is likely related to reduced food intake due to hormonal, functional and restrictive nature of the surgical technique.

P.574
ONE ANASTOMOSIS GASTRIC BYPASS: AN OPTION FOR THE TREATMENT OF DYSFUNCTIONAL GASTRIC BAND IN PATIENTS WITH MORBID OBESITY.

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Background: Laparoscopic Gastric Band (LGB) is one of the less invasive restrictive methods and totally reversible for the treatment of Morbid Obesity (MO), its positioning technique is relatively simple and it has turned this bariatric procedure in one of the most popularly used in our country. Some authors have reported good short term results in the reduction of the excess of weight, nevertheless, the dysfunction incidence and/or long term failure is high. At the moment, the removal of the band is the most used method, even though these resolve the complications, it is also associated with a fast recovery or persistence of the obesity. One Anastomosis Gastric Bypass (OAGB) is a restrictive/Malabsortive method for the treatment of MO, Several authors have demonstrated good results and benefits comparing it with other techniques. The aim of this intervention is to show our initial experience in 18 patients with persistent MO secondary to a dysfunctional LGB in whom a laparoscopic removal of the GB and conversion to OAGB was performed at the same surgical time and with a follow up to 1, 3 and 6 months.

Methods: From September of 2010 to April of 2014, 18 patients with persistent MO secondary to a dysfunctional LGB confirmed by endoscopy and contrasted study, were operated on by laparoscopic route of retirement and conversion to OAGB in the same surgical time. Data Include: demographics, preoperative Body Mass Index (BMI), symptomatology and associated preoperative morbidity, surgical time, duration of hospital stay and postoperative weight loss t to 1, 3 and 6 months.

Results: The age average was 35,7 years (19-50), BMI average: 42.0 kg/m² (35,1 - 57,2). 10 (55,5%) referred progressive increase in the rations of food getting to be similar to the previous one at the positioning of the BG. The associate morbidity: Diabetes Mellitus 5 (27,7%), Hypertension: 4 (22,2%), sleep apnea: 6 (33,3%). The operating time was 161 (125-210) minutes. 5 or 6 trocars were used. The removal of the band was made by dissection of the gastric plication, exposition and cut of the safety pin and extraction. The creation of the gastric pouch began at 7-8 cm below the GE junction with 32 Fr. calibration bougie and the G-J anastomosis was created at 250 cm from the Treitz fixation. In one patient (5,5%) cholecystectomy due to lithiasis was made during the same procedure. All cases were completed by laparoscopic approach. In all of them water soluble gastrography was done 48 hours after surgery. The hospital stay was 2,38 (1-4) days. 1 patient (1,1%) presented a non-complicated pneumonia that required re-hospitalization for 72 hours. 1 (1,1%) had an infection in the drum site of the previous gastric band. 1 (5,5%) presented dehiscence at a 12 mm trocar site. All the patients indicated improvement of the esophagus-gastric group of symptoms, 2 patients (11,1%) declared to have dyspeptic symptoms. 8 patients (44,4%) have said yes to control endoscopy to the 6 months with normal report. Mortality was 0. The follow up was made every month during the first 6 months. The loss percentage of weight excess was: 3 months 36,4%, 6 months 55,6%.

Conclusions: The conversion to OAGB is an effective option for the treatment of the dysfunctional and/or insolvent LGB, with short term favorable results in weight loss.

P.575
QUALITY OF LIFE AFTER USING DUODENAL-JEJUNAL BYPASS LINER (ENDOBarrier®)

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Background: EndoBarrier® is a duodenal-jejunal bypass liner (DJBL) that mimics the duodenal-jejunal exclusion component of the Roux-en-Y gastric bypass. The aim of this study was to evaluate the health-related quality of life (HRQoL) in patients explanted after one year of use of DJBL.

Methods: 19 implanted morbid obese patients using the device for one year. We applied the Moorehead-Ardelt Quality of Life Questionnaire post-explant. 5 key areas were examined with this questionnaire: self-esteem, physical well-being, social relationships, work, and sexuality. Each of these questions offered 5 possible answers, which were given + or - points according to a scoring key.

Results: Mean age: 41 (22-54) years; 15 female; mean weight: 106 (83-144) kg; mean BMI: 43 (37-58) kg/m². Mean time of use was 367(366-368) days. Mean weight at 24-week and at explant time were 96 (66-122) and 90(63-112) kg, respectively (p<0.001). The % excess of weight loss at explant was 40.3 (6.1- 85.7). 16 patients had abdominal pain during follow-up, 5 of whom were hospitalized. The results according item questionnaire were as follows (points): self-esteem 5 (2-5), physical well-being 5 (3-5), social relationships 5 (3-5), work 5 (2-5), and sexuality 3 (1-5). There were statistically significant relationship between weight loss and improvement in quality of life (p<0.0001).

Conclusions: DJBL showed high scores in QOL after one year despite of most of patients developed abdominal pain. The only item not improved was sexuality probably related that sexuality is closely related to self-esteem and body image and relationship partner before surgery.

P.576 THE EFFECTS LAPAROSCOPIC SLEEVE GASTRECTOMY ON IL-33, ST-2 AND PROCALCITONIN AS INFLAMMATORY MEDIATORS

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Background: The low-grade inflammatory state in obesity leads to insulin resistance and endothelial dysfunction, which promote cardiovascular diseases. Interleukin 33 (IL-33) is a member of the IL-1 cytokine family. Recently, expression of IL-33 and its receptor sST2 was reported in adipocytes and adipose tissues. The aim of this study was to examine the relationship between subclinical inflammation and weight loss by Laparoscopic Sleeve Gastrectomy (LSG) in morbidly obese patients.

Methods: Plasma concentrations of IL-33, sST2, procalcitonin, and high sensitive C-Reactive Protein (hsCRP), metabolic markers, such as homeostatic model assessment insulin resistance (HOMA-IR) and body mass index (BMI) were determined in morbidly obese patients (n=20) at baseline, one month and six months after operations. Baseline levels in patients were also compared with age-matched controls (n=20). Plasma IL-33, sST2, procalcitonin, and hsCRP levels were determined by enzyme-linked immunoassay methods.

Results: Plasma IL-33, sST2, procalcitonin, and hsCRP levels and HOMA-IR were significantly higher in morbidly obese patients than in controls. HOMA-IR was significantly correlated with IL-33, sST2, and hsCRP in the obese group at baseline. There was a significant positive correlation between hsCRP with IL-33 and sST2 levels. 1 and 6 month after LSG, plasma IL-33, sST2, procalcitonin, and hsCRP levels, HOMA-IR and BMI were significantly decreased.

Conclusion: The IL-33, ST2 and procalcitonin play important roles in obesity. Insulin resistance and endothelial dysfunction were improved and inflammation biomarkers were decreased by weight loss after LSG thus, surgery may be effective in reducing pro-inflammatory risk in obese individuals.

P.578 SINGLE-STAGE LAPAROSCOPIC SLEEVE GASTRECTOMY WITH GASTRIC BAND REMOVAL

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Background: Laparoscopic adjustable gastric band (LAGB) revision to sleeve gastrectomy is a well-established procedure for cases of inadequate weight loss or complications of band placement. The optimal method of revision remains controversial, with some authors proposing the single-stage removal of LAGB and creation of laparoscopic sleeve gastrectomy, and others arguing that it is safer to be performed in two stages.

Methods: 23 patients who underwent laparoscopic adjustable gastric band (LAGB) removal and sleeve gastrectomy at the same time, from January 2010 to December 2014, were retrospectively reviewed. 5 of them were men and 18 women. The average age was 38 (25-49), and mean body mass index before conversion was 48 and 45 respectively. All patients underwent gastroscopy and barium swallow prior to the operation and there was no sign of stomach perforation or erosion or severe band slippage. In one case the band had already been placed twice before the definite removal and conversion to sleeve gastrectomy in a single stage operation.

Results: No conversion to open surgery was required and no patient died. One of the twenty-three patients (1/23) developed a subclinical leak, expressed as elevated drain amylase levels, that extended his hospital stay for two days. Deep venous thrombosis

developed in one patient (1/23). Postoperative course of the rest 21/23 patients was uncomplicated and weight loss in the first year was a median 74% of the excess weight.

Conclusions: Single-stage LAGB removal and conversion to LSG seems to be safe and efficient in cases of absence of stomach perforation, erosion or severe band slippage.

P.579
FEASIBILITY AND EFFECTIVENESS OF LAPAROSCOPIC SLEEVE GASTRECTOMY AFTER A FAILED VERTICAL BANDED GASTROPLASTY

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Introduction: Vertical banded gastroplasty (VBG) was a popular purely restrictive bariatric procedure, with excellent short term results. It has lately fallen into disuse, mainly due to failure to sustain weight loss. This has led to a number of patients in need of revisional bariatric surgery. The purpose of this study is to present the feasibility and effectiveness of laparoscopic sleeve gastrectomy (LSG) after a failed VBG.

Method: 12 patients underwent laparoscopic conversion of VBG to SG in the period 2010-2014 by a single surgeon. Mean age was 42 years and BMI 44. All patients underwent preoperative barium swallow and gastroscopy that showed failure of the VBG due to enlargement of the pouch, disruption of the staple line or widening of the mesh ring. Mean operational time was 153 minutes.

Results: All operations were completed laparoscopically despite the presence of adhesions. Mean hospital stay was 4 days. Weight loss after one year was 72% of excess weight. There was one incidence of staple line leak that eventually required total gastrectomy due to persistent gastrocutaneous fistula.

Conclusion: Laparoscopic sleeve gastrectomy is feasible and safe after an open vertical banded gastroplasty, with results comparable to sleeve gastrectomy performed as the primary operation.

P.596
ORGANIC CONSEQUENCES OF ISOLATED ILEAL TRANSPOSITION IN RATS WITH DIET-INDUCED DISGLYCEMIA

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Background: Surgical procedures that can promote euglycemia in non-obese diabetic patients are investigated. The isolated ileal interposition (III) theory could lead to an effective alternative therapy because of its effects on metabolism of glucose as a consequence of the rearrangement of gastrointestinal anatomy. The purpose of this study is to evaluate the physiological effects of III in an experimental model of diet-induced disglycemia.

Methods: Seventy two 12-week-old male wistar rats were distributed into four groups: interposition group; sham group; hypercaloric pellet-diet cycle control group; and control group, which received normal diet. All animals that were submitted to operation received a cycle of four high-calorie, high-fat diets (HD) over a 18-week period and had developed glucose dismetabolism. The effects of the diet consumption and surgery were analyzed in terms of food intake, body weight, Lee index, body fat composition, hormone-metabolite levels (glucose, insulin, glycated hemoglobin, C-peptide and glucagon-like-peptide-1), oral glucose tolerance test and intraperitoneal insulin tolerance test. All parameters were analyzed twice before the surgeries and twice after it, while some were measured weekly, till euthanasia was performed 18 weeks later.

Results: The HD cycle promoted significant increases in body weight, adiposity and impaired glucose tolerance. The III did not caused weight loss, food intake decrease, nor improvement in the glicid metabolism.

Conclusions: The HD cycle model promoted obesity and induced disglycemia in rats. The III, in this study, did not show significant improvement in the parameters related to diabetes.

P.597
SPECIFICS OF NURSING CARE IN PATIENTS WITH MORBID OBESITY

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Background: 10 years ago one of the few methods for the treatment of morbid obesity in Bulgaria was Laparoscopic Adjustable Gastric Band (LAGB). The authors share their clinical experience in the treatment of obese patients in which it is placed LAGB and analyze the specifics of nursing care in these patients. Patients with morbid obesity are among the most problematic patients with very high risk of perioperative complications and mortality. The blades are heavy concurrent comorbid pathology and treatment and perioperative care require particular attention

Patients and Methods: The authors analyze perioperative outcomes and mortality in 36 patients after LAGB 5 - year period - 2006 - 2010 Body Mass Index - 33 to 62 distribution by sex - m-16; f- 20. Average age - 48,8 (39-66). In all patients was placed LAGB. Applied protocol for Fast track, including preoperative risk assessment, introduction of patients with potential complications, perioperative antibiotic prophylaxis, perioperative prevention of thromboembolic complications, early ambulation, early feeding and recovery of flatulence.

Results: Average preoperative stay 0.8 days (0-1), mortality in the early postoperative period - 2 patients (5.56%) due to pulmonary thromboembolism conversion - 1 case (2.78%) regarding unrecognized preoperative decompensated cirrhosis and portal hypertension.

Conclusion: Introduction of LAGB in operational practice was accompanied by a large initial enthusiasm. This is due to a reduction in weight and BMI in precise compliance with the methodology. Later came to the fore late complications of this method (bleeding preforatsiya stomach, etc.), Prompting surgeons prefer other bariatric operations (Sleeve gastrectomy, BPD, etc.).

P.598

SLEEVE GASTRECTOMY ALONE IN A PATIENT WITH GIANT INCISIONAL HERNIA: A GOOD IDEA.

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Background: Sleeve gastrectomy is an effective surgical treatment for morbid obesity. The management of ventral hernias in bariatric surgery patients remains difficult and controversial. Several case reports describing combined laparoscopic surgery showed higher morbidity and mortality compared to bariatric surgery alone.

Methods: Case report.

Results: A 54-year-old man with BMI 52,6, presented with diabetes mellitus, arterial hypertension, sleep apnea, back pain, venous insufficiency and a giant incisional hernia, due to earlier duodenal ulcer perforation surgery. The hernia's neck size was 32 cm. All non-operative attempts at weight reduction earlier had failed. Previous esophagogastroduodenoscopy revealed no abnormalities. The patient was informed preoperatively about the possibilities of combined and delayed surgeries. We performed sleeve gastrectomy alone, last February. We used a five-port technique for obesity surgery, with modified placement of the ports. The operative time was 100 min and the hospital length of stay was 2 days. There were no post-operative minor or major complications. One month after surgery he had lost 16 kg (20,5% EWL). He was doing rather well. He could sleep better and noticed an improvement of capacity for work.

Conclusions: Better appreciation of patient characteristics helps to support which type of procedure will likely succeed. Giant hernias should not be repaired during the bariatric procedure, but when the patient has undergone some weight loss or at the time of abdominal wall plastic surgery, after fully informed consent from the patients.

P.599

THE COURSE OF GASTROESOPHAGEAL DISEASE GERD FOLLOWING GASTRI SLEEVE RESECTION IN BARIATRIC SURGERY

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Background: Gastric acid production, hiatal hernia and increased intraabdominal npressure in the obese patient are supporting GERD. Gastric sleeve resection for weight reduction with the resection of the angle of HIS a great part of rthe acid producing B-cells and Weight loss associated with a decrease in intraabdominal pressure as a result of the operation will potentially ameliorate GERD. However gastric sleeve is considered a contra indication in patients with GERD and Bypass is proposed instead.

Patients and methods: The incidence and course of GERD was investigated in 80 consecutive patients undergoing sleeve resection. Follow up was performed 3,6,12 months post op and yearly thereafter by clinical signs of GERD ie medical history, requirement of antacids and gastroscopy.

17 were males and 63 females. BMI was 49,5kg/m².

17 patients (21%) required antacids preoperatively but without signs of reflux esophagitis.

Statistics: The student t-test was used for quantitative differences and Fisher's exact –test for qualitative differences.

Results: A total of 9 patients (11%) developed De Novo GERD with treatment required. Out of 17 preoperatively symptomatic patients 13 (76%) could cease medication, 4 (24%) continued to require therapy ($p < 0.0001$). Weight reduction was 14 BMI points one year after surgery ($p < 0.0001$).

No patient required change to gastric bypass construction.

Conclusion: The data suggest that GERD following gastric sleeve can occur however the course of pre-existing GERD is mild in the majority of patients or can develop into cure of GERD most likely due to the effective weight reduction and resection of acid producing cells.

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MID-TO LONG-TERM RESULTS OF SLEEVE GASTRECTOMY FOR MORBID OBESITY: 5-8 YEAR RESULTS

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Background: Laparoscopic Sleeve Gastrectomy (LSG) has become gained popularity as a stand-alone bariatric procedure, however, long-term outcome studies regarding weight loss and resolution of Obesity Related Comorbidities (ORC) are limited.

Methods: A retrospective analysis was performed of 277 patients that underwent LSG as a stand-alone procedure between January 2007 and January 2010. Their initial Body Mass Index (BMI) was 45 kg/m² (range 35-72).

Results: The median percentage Excess Weight Loss (%EWL) was 54% ± 33% at 8 years, 57% ± 30% at 7 years, 59% ± 23% at 6 years, and 57% ± 25% at 5 years. Remission of type 2 diabetes could be reached in 45%; hypertension 48%, obstructed sleep apnea 55 %, hyperlipidemia 21% and GERD 35%, with onset of new GERD symptoms in 23%. Reoperation for weight loss failure was executed in 12% (n=32) and for GERD in 2% (n=5) of patients.

Conclusions: LSG as a stand-alone procedure is an effective bariatric procedure with regard to weight-loss and resolution of ORC. However, there is a tendency for weight regain after 3 to 4 years. As a result the rate of revisions seems to be higher than after gastric bypass which might also be caused by the fact that a second procedure after LSG is more obvious than after LRYG. Long-term RCTs comparing LSG versus LRYGB are needed to clarify the field of indications for either LSG and for LRYGB.

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INCREASED BONE TURNOVER/ RISK OF FRACTURE BETTER ASSESSED BY SERUM BONE ALKALINE PHOSPHATASE LEVELS IN BARIATRIC PATIENTS

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Background: Prolonged vitamin D (vitD) deficiency can lead to secondary hyperparathyroidism resulting in increased bone turnover which is associated with a high risk of fractures. Routinely, 25 hydroxyvitaminD3 (25OHvitD) and parathyroid hormone (PTH) levels are measured to guide vitD supplementation in bariatric surgery patients pre and postoperatively. Although not routinely measured, elevated bone alkaline phosphatase (BALP) isoenzyme is a direct marker of increased bone turnover. We present our data to emphasize BALP as a more consistent, direct biochemical parameter of bone turnover/fracture risk than 25OHvitD and PTH levels.

Methods: Prospectively collected data of routinely measured parameters (25OHvitD, PTH, BALP, calcium, phosphate & magnesium) in bariatric surgery patients in our unit was compiled to identify patients with high bone turnover over a period of 5 months.

Results: 15 symptomatic patients were found to have markedly elevated BALP isoenzyme (>70%) suggesting increased bone turnover. However, only 25% patients had very low vitamin D levels <30 nmol/L. Elevated PTH was found in only 53.3% patients. Based on elevated BALP levels, all patients were treated with high doses of vitD with significant clinical improvement.

Conclusions: Prolonged vitD deficiency can be associated with increased bone turnover and risk of fractures. 25OHvitD and PTH levels are routinely measured to guide vitD therapy in bariatric surgery patients. However our study suggests that BALP- a direct biochemical marker of bone turnover correlates better with the clinical picture and should be used to guide VitD therapy for improving clinical outcomes.

P.602

DOES THE SIZE OF THE CARTRIDGE OF LINEAR STAPLED GASTRO-JEJUNOSTOMY IN GASTRIC BYPASS PATIENTS INFLUENCE WEIGHT LOSS?

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Background: Size of the pouch and diameter of the gastro-jejunostomy seem to influence postoperative weight loss in gastric bypass patients. However there is no consensus which size of each component is optimal for best weight loss. We studied two different lengths of the cartridge of linear stapled gastro-jejunostomies.

Methods: In our institution gastric bypass is performed in a completely standardized fashion. Pouch volume contains around 15 ml, alimentary limb 135 cm, biliary limb 80 cm in BMI 40 – 60. Over a long time we used a 45 mm blue cartridge and a running suture to create a lateral side-to-side anastomosis to the pouch. Since 2012 we used instead of a 45 mm a 30 mm blue cartridge. Nothing else of the standard was changed.

Results: 100 patients of each group were followed over a period of 24 months in regard of weight loss. Excess weight loss was more prominent in patients who received a 30 mm staple line. Evaluation is not yet completely finished. Final results will be presented.

Conclusion: Linear stapled gastro-jejunostomy by 30 mm cartridge goes along with a better weight loss than using a 45 mm cartridge.

P.603

TOTAL MIGRATION OF SLEEVE GASTRECTOMY TO THE THORAX

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Background: In the past few years, Laparoscopic Sleeve Gastrectomy became a frequent bariatric procedure. Morphological alterations of the gastroesophageal tract arising out of the procedure may lead to complications as migration intrathoracic often related dyspeptic symptoms. In this study we describe a case of total thoracic sleeve migration regarding the symptoms, treatment and follow-up clinic.

Methods: A 38-year-old obese female patient, with a body mass index of 35.38 kg/m² with severe chondropathy knees and lumbar disc protrusion underwent a laparoscopic sleeve gastrectomy. Pre-operative upper digestive endoscopy with mild antral gastritis. There were no technical complications. The immediate postoperative period was incident-free. Two months after the surgery, the patient started with headburn and regurgitation, unresponsive with proton pump inhibitor. The esophagogastroduodenography showed total thoracic sleeve migration. Surgical treatment was indicated.

Results: Complete reduction in abdomen of the migrated sleeve was performed, with hiatoplasty and fixation of the gastric remnant in position. The esophagogastroduodenography showed up normal. Six months after the procedure, her current body mass index is 24.20 kg/m² and she is asymptomatic.

Conclusion: Sleeve gastrectomy is a safe, reproducible technique with a relative low rate of complications. Total intrathoracic sleeve migration is a rare finding and could be related to gastroesophageal symptoms. Further studies is required to understand the underlying mechanisms.

P.610

CONVERSION FROM SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS. A SINGLE CENTRE EXPERIENCE.

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Background: Sleeve gastrectomy has traditionally been performed as a bridging procedure before biliopancreatic diversion with duodenal switch (BPD-DS) for super-super-morbid obesity. Due to the easy technique and to the excellent weight loss on the short period it has emerged as an outstanding procedure in its own right. On the other hand the results on the long term are still on discussion. Currently, the only surgical procedure that appears to satisfy expectations on both the short and the long term is the gastric bypass (RYGB). In case of failure of sleeve gastrectomy, a conversion to gastric bypass seems the most appropriate procedure to choose. The causes of failure after sleeve gastrectomy are insufficient weight loss or weight regain and intractable severe reflux.

Methods: In our department 13 patients underwent conversion from sleeve gastrectomy to RYGB from 2011 to 2014. Two of them had a major gastro-oesophageal reflux not respondent to the pharmacological therapy with high dose of PPI. In one case a sliding hiatal hernia was present, while in the second case a major oesophageal dilatation was identified. The other eleven patients presented either an

insufficient weight loss, or an important weight regain. The sample group of patients has a mean age of 41 years and a mean BMI of 39,89 Kg/m².

Results: The mean interval between the two surgical procedures was 41 months. Weight loss was significantly improved after conversion with a mean percentage of excess of body mass index loss (%BMIL) of 39,11 % at the 6-month follow up, and at 56,36 % at the 12-month follow up, versus 29,03 % before conversion.

Both of the patients who underwent conversion to RYGB following the development of an intractable gastro-oesophageal reflux, did not require further postoperative medications at 12 months.

Only one postoperative complication was observed in the form of a leakage at the level of the gastro-jejunal anastomosis. The leakage was treated conservatively with a 2-week course of antibiotics and enteral nutrition over a period of 30 days. A gastroscopy confirmed the healing of the leakage. No further surgery was required.

Conclusions: The increasing number of patients undergoing sleeve gastrectomy will lead to an increasing amount of conversion to RYGB. On the other hand revisional bariatric surgery is a demanding surgery that has to be performed in specialised centres.

According to our experience, that is in line with the scientific literature, for the treatment of insufficient weight loss or weight regain and severe gastro-oesophageal reflux after sleeve gastrectomy, conversion to RYGB is a secure and valuable procedure.

P.616

THE OPTIMIZE PRINZIPLE – A MENTORSYSTEM BOOSTS THE LEARNING CURVE

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Background: Today, obesity is in Germany like worldwide epidemic and there is need of additional bariatric centers. The OPTIMIZE-Trial is a prospective, multicentric observational study including a mentoring system to support starting bariatric centers. The primary endpoint is quality of life after sleeve gastrectomy versus gastric-bypass. Secondary endpoints are weight loss, health resource utilization return to normal activity/functionality and complications.

Methods: Centers are divided in low volume centers (lvc) and in high volume centers (hvc). Patients with a BMI between 35 and 55 kg/m² are included to the study; exclusion criteria is prior bariatric intervention. Patient data are recorded in 7 visits during the first year. lvc are support by leading surgeons of hvc in a mentorship program. Those „mentors“ are instructed to give assistance in first procedures and in management of complications.

Results: Finally 304 patients were recruited in 12 lvc (46%) and 5 hvc (54%). In 57% of the cases a sleeve gastrectomy, in 43% a gastric bypass was performed. The conversion rate and the perioperative mortality were 0%. The Total morbidity rate in lvc and hvc was similar (14,4% vs 14,4%). Major complication rate was not significant is higher in hvc (7,3% vs 5,8%). The median hospital stay was not significant shorter in high volume centers with 6 vs. 10 days.

Conclusions: The developed bariatric network, the comparable low complications, conversion and mortality rate in lvc and hvc also in comparison to the German bariatric register demonstrates a shortened learning curve and the success of the mentorship program.

P.617

THE OBALON BALLOON: A CASE SERIES

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Background: The Obalon gastric balloon system is indicated for temporary use for weight loss in overweight and obese adults. The Obalon balloon is the first balloon that allows for placement by simply swallowing a capsule, avoiding the need for endoscopic insertion. The result is a first choice weight loss therapy that helps patients feel full faster so they eat less and achieve their weight loss goals.

Methods: This is a single surgeon case series of Obalon balloon insertion. The patients had a 2nd balloon on request four weeks after the first balloon and they could also request a third balloon eight weeks after having the first balloon. All the balloons were removed three months after insertion of the first balloon.

Results: Forty-three patients had Obalon balloon insertion, 35 females and 8 males. The mean BMI before balloon insertion was 34.92 (+/- standard error) and the mean BMI at the finish was 33.09 (+/- standard error). 19 out of the 43 patients had a second balloon, 1 out of the 43 patients had a third balloon. There was no balloon intolerance. All balloons were removed without incidence. Six patients gained weight during the treatment period. One patient contracted gastritis. The mean weight loss was 4.97kg. The mean excess body weight loss was 22.7%.

Conclusions: The Obalon is a safe and efficacious treatment for weight loss with a good weight loss profile.

P.619

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING – ARE THE COMPLICATIONS EXCEED THE BENEFITS

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Background: With the beginning of the new century a variety of new and quite intriguing operative techniques and devices for morbid obesity were presented. One of these new and very promising devices for operation treatment of morbid obesity was the Laparoscopic Adjustable Gastric Band (LAGB). We share our clinical experience with the benefits and complications which we observed in thirty six patients with morbid obesity on which Laparoscopic Adjustable Gastric Banding was performed from the beginning of 2006 till the end of 2010.

Patients and Methods: We analyze group of thirty six (36) patients after Laparoscopic Adjustable Gastric Banding on who we performed postoperative follow up till present days. The mean Body Mass Index is – 41.3. The sex distribution is male- 16 patients; female- 20 patients. Mean age is 48.8 years. In all of the cases Fast track protocol was performed, including preoperative risk assessment, introduction of patients with potential complications, perioperative antibiotic prophylaxis, thromboembolism prophylaxis, early ambulation, early feeding and recovery of flatulence.

Results: Average postoperative stay 2.37 days (2-3). We observed late postoperative complications (more than 1 year after surgery) in 19 patients. The most common complication in the late postoperative period was migration of the band. In 7 patients second operation was performed in order of removal of migrated and insufficient gastric band. In three patients migration toward the gastric lumen and gastric perforation was diagnosed. In five cases we observed late postoperative bleeding in the three year period after surgery. The mortality in the early postoperative period was 5.56% (2 patients). In the late postoperative period we observed 7 patients with severe malnutrition and malabsorption syndrome.

Conclusion: Introduction of LAGB in the surgical practice was accompanied by a large initial enthusiasm. This is due to a reduction in weight and BMI in precise compliance with the methodology. The presence of a large number of early and mostly late postoperative complications shifted the role of the LAGB in the treatment of patients with morbid obesity.

P.622

BARIATRIC PROCEDURES FOR PATIENT AFTER 60-TY: FIRST EXPERIENCE AND IMPRESSIONS FROM MOSCOW

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Background: Recent data shows the rate of morbid obesity among Russians in elderly individuals is on the rise. There no any data about bariatric procedures for elder patients in Russia.

Methods: A retrospective analysis was performed on 9 consecutive patients ≥ 60 years old who underwent weight loss surgery from October 2013 to October 2014. Primary data points included 30-day and 6-months mortality rates, length of postoperative stay (LOS), percent excess weight loss (EWL) and Clavien-Dindo complication rate.

Results: The average patient's age was 62.1 years with 6 female and 3 male patients. Average preoperative weight and BMI were 135.9 kg and 50.2 kg/m², respectively. Procedure types included Roux-en-Y gastric bypass - 2, sleeve gastrectomy - 7. All of procedures were performed by laparoscopy. Average LOS was 6.0 \pm 3.19 days. An average EWL of 40.6% at 6 months.

In all patients, the 30-day mortality rate was 0%. The 6-months mortality also was 0%.

Complication rates were acceptable – 3 patients, and according Clavien-Dindo classification I – 1 (trocar port infection), II – 2 (Atrial fibrillation and Aspiration pneumonia).

Conclusions: Weight loss surgery is safe and effective in patients ≥ 60 years of age, producing significant EWL reduction and associated with low rate of major postoperative complications.

P.624

PREOPERATIVE EVALUATION OF LIVER DISEASE IN BARIATRIC PATIENTS

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Background: Obesity is the most important clinical associations with non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatosis hepatitis (NASH). Patients undergoing bariatric surgery have a high incidence of NAFLD and NASH. The capability to identify advanced liver disease during surgery is inaccurate in many patients. Furthermore, correlation of serum markers to liver histology is reported to be disappointing in obese patients and ultrasound has its technical limitations in super-obese. Our aim was to assess the prevalence of non-alcoholic fatty liver disease in our cohort of morbidly obese patients and to evaluate the accuracy of preoperative serum scores for the prediction of NAFLD in obese patients.

Methods: In this retrospective study, a total of 302 patients who underwent laparoscopic bariatric surgery (Roux-Y Gastric Bypass or Sleeve Gastrectomy) and who had intraoperative liver biopsies were studied. Histological results were compared to preoperative serum markers and scores like AST/ALT ratio, BARD Score, APRI Index or NAFLD fibrosis score.

Results: The mean Body-Mass-Index was $51,6 \text{ kg/m}^2 \pm 9,7 \text{ kg/m}^2$. Of 302 patients, 17,2% had normal liver tissue, 41,7% had mostly steatosis and 37,1% had liver fibrosis. Mean steatosis rate was 40%. Liver cirrhosis was diagnosed in 12 patients (4%). NASH was detectable in 40,7%. The accuracy of most noninvasive scores for the detection of advanced liver disease was low in morbidly obese patients.

Conclusions: Preoperative prediction of liver disease in patients undergoing bariatric surgery has several limitations. Further studies are needed to develop reliable noninvasive diagnostic methods.

P.625 THE EFFECT OF OBSTRUCTIVE SLEEP APNEA ON PRE- AND POSTOPERATIVE QUALITY OF LIFE OF BARIATRIC SURGERY PATIENTS

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Background: Morbid obesity is an increasing problem worldwide, known for its impact on quality of life (QoL). As obstructive sleep apnea (OSA) is one of the highest accompanying comorbid conditions, aim of this study was to investigate the independent influence of OSA on the QoL in bariatric surgery patients.

Methods: All patients who underwent primary laparoscopic Roux-en-Y gastric bypass or laparoscopic sleeve gastrectomy were reviewed. Inclusion criteria were available apnea-hypopnea-index (AHI) and QoL questionnaires, including Short Form-36 (SF-36) and Influence of Weight on QoL-Lite (IWQoL-Lite), which were completed six to nine weeks before- and fifteen months after surgery. Percentage excess weight loss (%EWL) was included in analysis.

Results: A total of 323 patients were included. OSA was diagnosed in 55% of the patients. All QoL subscale scores significantly improved after bariatric surgery. OSA had no effect on SF-36 outcome, whereas OSA patients, in particular moderate and severe OSA patients, had less improvement on IWQoL-Lite subscales public distress and work. At a mean follow-up of eleven months, 37 moderate and severe OSA patients (38%) repeated poly(somno)graphy. Less IWQoL-Lite scores on physical functioning, public distress and total score were found in patients with persistent OSA, independently from %EWL.

Conclusion: After bariatric surgery, QoL significantly improved on all subscales. The presence of OSA, especially moderate and severe forms, might independently impair the improvement of several IWQoL-lite domains after surgery.

P.627 EARLY POSTOPERATIVE COMPLICATIONS OF LAPAROSCOPIC GASTRIC BYPASS IN A HIGH VOLUME CENTRE.

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Background: Morbid obesity is a serious health condition that is associated with an increased morbidity and mortality. Laparoscopic Roux-en-Y gastric bypass (LRYGBP) is currently the gold standard bariatric procedure. Most articles highlight the outcome in terms of weight loss, but few focus on the complication rate.

Methods: A retrospective data analysis, from the DRG registry in our hospital and the EAC-BS IFSO registry, was performed from patients who underwent a LRYGBP in the period between 01/01/2010 till 30/06/2014 in a high volume obesity centre and the complications during the early postoperative period (within 30 days) were reported.

Results: A total of 2 117 patients were included and 32 patients (1.51%) had 32 early postoperative complications. 21 of these patients (66%) underwent a primary pLRYGBP, 8 of them (25%) a revisional procedure (rLRYGBP) with conversion after gastric banding and 3 (9%) with previous removal of the gastric banding. A concomitant cholecystectomy was performed in 6 patients. The mean age was 43 years and the mean BMI 40.4kg/m². Most patients were female (66%). The mean hospital stay was 6.14 days after pLRYGBP and 16.09 days after rLRYGBP including 5 readmissions. The following complication rate was reported according to the Clavien-Dindo Classification: 15.5 % grade I, 19% grade II, 0% grade IIIa, 65.5% grade IIIb requiring surgical intervention under general anesthesia, 0% grade IV and V complications.

Conclusion: In this analysis few early postoperative complications (1.51%) were reported after LRYGBP, without considering the clinically important late complications. We emphasize the increased risk after rLRYGBP in 34.4% and the extended length of stay. In experienced bariatric high volume centres the LRYGBP is a safe procedure with acceptable postoperative complications.

P.630

GASTRIC PPLICATION. EXPERIENCE OF ONE UKRAINIAN SITE.

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Background: Some obese patients in Ukraine can't pay for laparoscopic gastric plication surgery or for laparoscopic gastric bypass surgery because of high prices for linear staplers (EndoGia, Eshelon etc.) Another patient doesn't want to implant prosthetic devices or resect part of stomach. That's why some Ukraine patients choose gastric plication surgery.

Methods: 42 patients were operated. First 6 patients were operated with open laparotomy technic. Next 36 patients were operated laparoscopically. In both types of operations great omentum was dissected by dividing of short gastric vessels. Then great curvature was folded inward, with 2 suture lines to reduce the gastric capacity.

Results: The average preoperative body mass index was 39.8 kg/m² (range 35.0–48.2). Five patients were men, all other women. For patients completing 1 year of follow-up, the percentage of excess weight loss was 27.3%. For patients of second year follow-up, the percentage of excess weight loss was 36.1%. In postoperative period the gastric fistula formed in one patient, six patients had vomiting and nausea more than 3 days.

Conclusions: We decided that Gastric Plication surgery can be used as bariatric procedure in patients who can't pay for expensive surgery or for patients who don't want to implant prosthetic devices or resect part of stomach. The weight loss results can be decided as good, especially at patients who underwent laparoscopic procedure.

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PERIOPERATIVE OUTCOME OF SUPER-SUPER-OBESE PATIENTS (BMI > 60) UNDERGOING BARIATRIC SURGERY

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Background: Prevalence of obesity is increasing with a pandemic magnitude worldwide. The percentage of Super-Super-Obese individuals (BMI >60 kg/m²) is expanding by the same means. However, it is discussed controversially in how far surgical complication rates increase in those individuals due to their tremendous overweight and accompanied comorbidities.

Methods: This study analyzes a prospective cohort of 715 patients who underwent bariatric surgery between 03/ 2010 and 11/2013. The database includes patients' characteristics, type of procedure, comorbidities, previous bariatric surgeries and 30-day morbidity and mortality. Patients were subdivided into three groups, Obese (BMI ≤ 49.9 kg/m²; O), Super-Obese (BMI ≥ 50 kg/m²; SO) and Super-Super-Obese (BMI ≥ 60 kg/m²; SSO).

Results: Remarkably, there were no significant differences between O, SO and SSO patients regarding perioperative outcome. Despite the incidence of steatosis hepatis (p < 0.05), the incidence of comorbidities did not differ statistically significant in between the groups. The age however, was significantly lower in SSO cohort. BMI was significantly lower in case of complications (p < 0.01), whereas the patients' age was significantly higher (p < 0.05). The BMI showed an inverse correlation to the patients' age at surgery (p < 0.01).

Conclusions: BMI > 60 should not be considered as a limiting factor for bariatric surgery outcome, however, the patients' age, surgeries prior to the bariatric procedure and comorbidities must be taken into account in terms of assessment of patients' outcome.

P.632
NEW THERAPEUTICAL OPTIONS FOR PATIENTS WITH POST-SURGICAL LATE DUMPING SYNDROME – GLP-1 WITH PREVIOUSLY UNREPORTED EFFECTS

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Background: Late dumping syndrome is encountered in approximately 3-5% of patients after gastric bypass surgery. About 60 % of the affected patients benefit of modification of dietary behavior as first step of possible treatment cascade. The first medical assessment is Acarbose as an inhibitor of the enzyme α -glucosidase. As surgical option, restriction for slower emptying of the pouch may be performed through implantation of an outlet minimizer. But there are patients remaining, which do not profit of these proved therapeutically options.

In those patients we tried an innovative treatment with GLP-1 (Glucagon-like peptide 1) mimetic. Against doctrine, the use of GLP-1 mimetic showed a remarkable decrease in insulin secretion together with a better synchronization of corresponding glucose blood levels as measured by repeated oral glucose tolerance tests (OGTT)

Methods: Seven patients were treated with GLP-1. Diagnostic modalities included OGTT (oral glucose tolerance test) with simultaneous insulin and glucose level measurement. OGTT was performed at baseline (without GLP-1 treatment), with 0,6mg GLP-1 daily and subsequently with 1,2 mg GLP-1. Continuous glucose measurement was performed and evaluated.

Results: The hypoglycemic symptoms improved considerable in all patients. Six of those seven were even completely without dumping symptoms. The fasting and the postprandial insulin levels decreased remarkably and adapted much better to the glucose levels.

Conclusions: GLP-1 showed impressing first results in 7 patients suffering from post-surgical late dumping syndrome. More research about this GLP-1 synchronizing action with decreasing the released insulin levels must be done.

P.633
SERUM C-REACTIVE PROTEIN IN TYPE 2 DIABETES AFTER METABOLIC SURGERY

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Background: Type 2 diabetes mellitus (T2DM) was recently recognized as a chronic inflammatory condition and associated with elevated inflammatory indicator, C-reactive protein (CRP). Recent studies have shown elevated CRP is a significant risk factor for cardiac events and stroke but the clinical significance of CRP has not been clearly studied in T2DM patients receiving metabolic surgery. This study is aimed at the clinical significance of CRP in morbidly obese patients and the change after bariatric surgery.

Methods: The study was a prospectively controlled clinical study. From 2007 to 2013, of 787 (487 females and 300 males) consecutive T2DM patients enrolled in a surgically supervised T2DM treatment program with at least 1 year's follow-up were examined.

Results: Of the patients, 489 (62.1%) had elevated CRP at pre-operative study. CRP was significantly related and both increased with increasing BMI. CRP is also increased with increasing waist, BMI, HbA1c, duration of DM, C-peptide, HDL-C, triglyceride, uric acid, AST, ALT, GGT, albumin, ALP, Ca, and WBC but decreased with increasing age. Multivariate analysis confirmed waist, glucose and HbA1c are independent predictors of the elevation of CRP. CRP levels decreased rapidly after metabolic surgery. These improvements resulted in a 88.6% reduction of CRP 1 year after surgery. There was no difference in weight (30.9 ± 15.4 kg vs. 28.5 ± 13.0 kg, $p=0.170$) and HbA1c (2.9 ± 3.8 vs. 2.3 ± 1.8 , $p=0.142$), but achieved higher the resolution of elevated CRP 1 year after gastric bypass surgery (90.9% vs. 78.5%, $p=0.004$), than individuals who underwent laparoscopic sleeve gastrectomy

Conclusions: Baseline CRP is elevated in T2DM patients but significant weight reduction 1 year after surgery markedly reduced CRP with a T2DM remission rate of 93.9%. Metabolic performed by laparoscopic surgery is recommended for obese T2DM patients with elevated CRP.

P.635
150 CONSECUTIVE DRAINLESS LAPAROSCOPIC SLEEVE GASTRECTOMIES: PROSPECTIVE ANALYSIS

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Background: Originally described as first-step bariatric procedure for super-obese patients, Laparoscopic Sleeve Gastrectomy (LSG) has emerged as an effective stand-alone operation. Complications after LSG are usually silent and difficult to interpret even with routine placement of intraperitoneal drains (ID). Our purpose was to describe the postoperative presentation and outcomes of drainless LSG

Methods: 150 consecutive severe or morbidly obese patients operated at a single institution were prospectively enrolled and underwent drainless LSG. ID was placed in case of intraoperative adverse event. No routine staple-line reinforcement was performed, haemostasis was realised by selective bipolar coagulation. The demographic and outcome data were collected and analyzed.

Results: 113 were women (75.3%). The Mean age was 37.06 ±1.09 years. And preoperative BMI was 44.93±0.53 kg/m². The Mean operative time was 87.4±2.3 min and 21(14%) were revisional LSG with concomitant or previous gastric banding removal for insufficient excess weight loss. 11 patients (7,3%) required elective drainage, because of challenging band removal (n=9), splenic tear (n=1) and associated cholecystectomy (n=1). The mean hospital stay was 4.2 days (1-25) with no mortality reported. No postoperative haemorrhage occurred. 4 patients (2.6%) had postoperative leak. The average time of leak diagnosis was 5 days (2-10) and were all successfully treated either by exclusive endoscopic procedures (n=2) or combined laparoendoscopic management (n=2).

Conclusion: Drainless LSG appeared feasible and safe without increased postoperative morbidity. It neither delays nor compromises complications management and participates in fast-track rehabilitation.

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SECONDARY HYPERPARATHYROIDISM IN BARIATRIC PATIENTS: COMPARING DIFFERENT PROCEDURES

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Background: Bariatric surgery is an effective therapy for morbid obesity but may reduce calcium absorption and significantly decrease bone mineral density. This study examined the prevalence of secondary hyperparathyroidism (SHPT) in obese subjects during follow-up after different bariatric surgeries. We investigated predictors of SHPT.

Methods: We enrolled 1439 obese subjects undergoing bariatric/metabolic surgery with at least one year follow-up, including 314 patients undergoing Roux-en-Y gastric bypass (RYGB), 693 undergoing single anastomosis (mini-) gastric bypass (SAGB), 92 undergoing laparoscopic adjustable gastric banding (LAGB) and 340 undergoing sleeve gastrectomy (SG). Five years of data were available for 279 patients. Patients were instructed to supplement their diet according to the guideline. Calcium, parathyroid hormone (PTH) and vitamin D levels were measured before surgery and at one and five years after surgery. SHPT was defined as PTH > 69 pg/mL

Results: The prevalence of SHPT was 21.0% before surgery and was not different between different the groups. Preoperative PTH correlated with age, BMI and vitamin D levels. Multivariate analysis confirmed that vitamin D level was the only independent predictor of SHPT before surgery. The prevalence of SHPT increased to 35.4% at one year after surgery and 65.7% at five years after surgery. SAGB had the highest prevalence of SHPT (50.6%) followed by RYGB (33.2%), LAGB (25.8%) and SG (17.8%) at 1-y after surgery. Serum PTH at 1-y after surgery correlated with decreased BMI and weight loss. Multivariate analysis confirmed that age and calcium level were independent predictors of SHPT after surgery.

Conclusions: Although bariatric/metabolic surgery is an effective treatment for morbid obesity, gastric bypass patients may need higher calcium intake to prevent perturbations in calcium homeostasis.

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LAPAROSCOPIC SLEEVE GASTRECTOMY FOR THE TREATMENT OF MORBID OBESITY IN PATIENTS OVER 60

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Background: Bariatric surgery may be considered a preventive strategy for complications of morbid obesity. Alas, it may be used as a tool intended to treat diseases related to obesity and to improve quality of life.

Methods: We retrospectively reviewed 629 patients who have undergone laparoscopic sleeve gastrectomy (LSG) at our institution between March 2012 and February 2015. We reviewed 43 patients (6.8%) who have undergone LSG aged 60-70yrs. The control group consisted of the rest of the cohort (n=586). The same surgical technique was performed in all.

Results: The initial BMI was equivalent 41.6kg/m² (41.1 for the over 60 vs. 41.9). Male to female ratio was equal in the over 60 group (22/21) as compared to a female predominance 67% in the younger age group (193/393). Median FU was 407 days.

The operative procedure was significantly longer in the over 60 group; 60min vs. 54min. (P=0.0199)

Weight loss was significantly lower for the over 60 group; TWL (24.1/38 kg p=0.0001), %WL (20.3/31.3 p=0.0001), ΔBMI (8.9/13.3 p=0.0001), %EBMIL (57.6/76.1 p=0.0001).

The complication rates were comparable. No perioperative mortality occurred.

Conclusion: Laparoscopic sleeve gastrectomy performed in the elderly is not as effective in terms of weight loss but can be performed safely.

P.647 MEDIUM TERM OUTCOME OF TYPE 2 DIABETES MELLITUS AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

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Background: Laparoscopic Roux en-Y gastric bypass (LRYGB) has emerged as a therapeutic option for type 2 diabetes mellitus (T2DM). However, there is a paucity of data on the effects of LRYGB on T2DM beyond 2 years. This study aimed to analyse medium-term effects of LRYGB on T2DM and to determine predictors of resolution/remission.

Methods: Data on consecutive patients with T2DM who underwent primary LRYGB between September 2009 and November 2010 were collected prospectively. T2DM outcomes were classified according to the American Diabetes Association guidelines: T2DM remission defined as no medication with HbA1c <48 mmol/mol (Complete, CR) or HbA1c 48-53 mmol/mol (Partial, PR). T2DM was considered improved when there was >50% reduction in the dose of medications. The effects of age, gender, baseline body mass index (BMI), preoperative excess weight, length of T2DM, preoperative T2DM medications, percentage excess weight loss (EWL %) at 4-years and BMI at 4-years on T2DM resolution were studied.

Results: Forty-six patients with T2DM underwent LRYGB with mean±SD age and BMI of 48.6±9.6 years and 50.4±6.5 kg/m², respectively. Median (IQR, interquartile range) duration of T2DM was 60 (36-126) months. Median (IQR) follow up was 52 (50-57) months. T2DM resolution was achieved in 76% of patients (CR = 61%, PR =15%), and further 15% of patients had improvement in their T2DM. Only 4 patients (9%) had no change in diabetes status. On univariate and multivariate analysis, significant EWL (p = 0.0027) and lower BMI (p = 0.018) at 4-years were the only independent clinical predictors of medium-term T2DM outcome.

Conclusions: In this study, LRYGB seems to offer excellent medium-term T2DM resolution. Moreover, significant EWL and lower BMI were predictors of T2DM remission.

P.653 SURGICAL TREATMENT OF GASTROGASTRIC FISTULA AFTER GASTRIC BYPASS

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Background: Gastrogastric fistula (GGF) is a rare complication following gastric bypass procedure (GBP). This study aims to present our experience in treating GGF occurring after GBP for obesity.

Methods: Data of all surgical procedures performed for GGF after GBP between January 2002 and December 2014 were reviewed.

Results: Twenty-seven patients underwent surgery for GGF after GBP. Most common symptoms were pain (59%) and food intolerance (52%). Significant weight-regain due to loss of restriction was present in only 33%. Upper GI series were performed in all but one patient; endoscopy in 85% (23/27). Upper GI series had a sensitivity of 77% for GGF. Endoscopy showed a marginal ulcer in 74% and the sensitivity for GGF was only 39%. Intraoperative findings showed GGF at the anastomosis at the posterior/posterolateral side of the pouch in 24 patients (89%). In all cases a resection of the gastro-enterostomy was performed with construction of a new circular stapled gastro-enterostomy more proximal. Subtotal gastrectomy was performed in 41% (11/27).

Conclusions: GGF is difficult to diagnose based on clinical presentation. Weight-regain can be a marker for late GGF. Symptoms such as pain or food intolerance are frequent but not specific. We advocate a low threshold for upper GI series in patients with refractory

ulcer disease after GBP. In case of GGF at the anastomosis, resection of gastro-enterostomy containing the fistula site and construction of a new anastomosis is required.

P.656
LAPAROSCOPIC LENGTHENING OF THE COMMON LIMB AFTER SCOPINARO BILIOPANCREATIC DIVERSION

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Background: The Scopinaro biliopancreatic diversion (BPD) used to be a common technique in bariatric surgery and has proven to be effective in weight loss and has many other beneficial effects. This extreme malabsorptive procedure could be associated with severe malnutrition, vitamin deficiencies, diarrhea and malodorous flatus.

Methods: We present the case of a 49 years old women who underwent an open Scopinaro procedure in 1998. Her preoperative weight was 132 kg and she lost 50 kg. Currently she has a BMI of 29 with a stable weight. Although she is overall satisfied with the result of the procedure, she presents with chronic vitamin deficiency, malodorous flatus, episodes of bloating and abdominal discomfort with pain and diarrhea.

Results: We present a video of a laparoscopically performed lengthening of the common limb. We counted a 70 cm common channel starting from the caecum. The anastomosis was broken down and a new side-to-side anastomosis of the biliopancreatic limb and the alimentary limb was made 80 cm more proximally. In this way a longer common channel of 150 cm was achieved. The patient was dismissed from the hospital after 3 days. There was an uneventful postoperative course and a relief of nearly all associated complaints.

Conclusions: Lengthening the common limb after a Scopinaro BPD is an optional therapy for patients with side effects of malabsorption. Performing this procedure laparoscopically is feasible.

P.659
INFLUENCE OF HELICOBACTER PYLORI AND GASTRITIS ON WEIGHT REDUCTION FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Laparoscopic sleeve gastrectomy (LSG) has become a leading bariatric surgical procedure used to treat morbid obesity. Helicobacter Pylori (HP) is thought to be protective against obesity, because of the gastritis-induced decrease production and secretion of the orexigenic hormone Ghrelin.

Methods: All morbid obesity patients admitted for LSG from January 2013-July 2014 were included. Gastric pathology identified gastritis and H. pylori. Mean FU period was 420 days.

Results: 369 patients underwent laparoscopic sleeve gastrectomy in our institution. The average age was 40 (14-70). There were 137 males and 232 females. The initial average BMI was 42 (34-54), which decreased to a BMI of 28 at follow up. Of the 159 pt. diagnosed with gastritis 124 (78%) were detected as HP+ infected. The median weight reduction was 41 Kg in the gastritis group versus 36 Kg (P=0.031) with a comparable BMI reduction of 14.5 versus 11 (P=0.0013). The median BMI reduction was 15.8 in the HP+ group versus 12 in the HP- group (P=0.0022)

Conclusions: Morbid obese patients who had gastritis had greater weight reduction following Laparoscopic Sleeve Gastrectomy than patients who did not. The identification of Helicobacter Pylori infection was also indicative of greater weight loss.

P.661
THREE REASONS NOT TO BAND – AN EXTREMELY RARE COINCIDENCE OF BAND ASSOCIATED COMPLICATIONS IN ONE PATIENT

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Case report: A 42-y old women presented with acute upper abdominal pain and mild dysphagia. A gastric band had been implanted 6y before, 2 y later the port had to be removed due to an infection. The tube and the band were left in situ. On admission, no clinical and laboratory signs of infection were found. First upper GI endoscopy revealed a 50% intragastric band migration. A CT scan surprisingly showed the tube of the band inside the first jejunal loops with the insertion point at the level of duodenum. A second upper GI

the stomach with a suture and clipping the duodenal fistula. Intraoperatively we found the proximal part of the tube surrounded completely by splenic tissue, so the tube must have arroded the upper splenic pole. Partial upper pole splenic resection was necessary, too. In the postoperative setting an abscess developed under the left diaphragm and was treated laparoscopically. The patient was dismissed after 2 weeks without further problems. Thus we present an extremely rare coincidence of band associated complications in one patient, which could be countered laparoscopically and one more time indicates potential life threatening risks of gastric band surgery.

P.662
SIBLINGS ACHIEVE GREATER WEIGHT LOSS COMPARED WITH UNRELATED INDIVIDUALS THAT UNDERWENT LAPAROSCOPIC SLEEVE GASTRECTOMY.

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Background: Many variables contribute to the success of weight loss following bariatric surgery. One of which might be the influence of the family environment. This study evaluates the results of laparoscopic sleeve gastrectomy (LSG) performed on several members of the same family.

Methods: We reviewed 369 patients who have undergone LSG between January 2013 and July 2014. 17 LSG pair patients, defined as siblings (7), parent & child (6) or spouses (4). The control group consisted of the rest of the cohort (n=352). The same surgical technique was performed in all.

Results: The initial BMI was equivalent 42kg/m². Mean FU was 309 days. The overall weight loss was equivalent. However, when analysed separately siblings showed better results in terms of both TWL (48/40 kg p=0.0485), %WL (42.8/33.3 p=0.0620), ΔBMI (13.4/12.9 p=0.1100), %EBMIL (88/82.7 p=0.0234). Spouses achieved somewhat intermediate results, and the sub group of parent & child achieved relatively poor results.

Conclusion: Laparoscopic sleeve gastrectomy performed in members of the same family resulted in greater weight loss for siblings and lower weight loss for spouses compared with the control group of unrelated individuals. Further larger series are needed to verify these results.

P.667
RESTING ENERGY EXPENDITURE AND BODY COMPOSITION OF WOMEN WITH WEIGHT REGAIN AFTER BARIATRIC SURGERY

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Background: Weight regain 24 months after Roux-en-Y gastric bypass (RYGB) and low protein intake in patients are common, favoring fat-free mass loss and lowering resting energy expenditure (REE). This study assessed REE and its association with the body composition of women with weight regain and no protein supplementation 24 months after RYGB.

Methods: We determined the body mass index (BMI; kg/m²), REE (Kcal) by calorimetry, body composition by tetrapolar bioelectrical impedance analysis, and energy intake by two 24-hour recalls of 34 patients with at least 5% of weight regain and no protein supplementation. The software SPSS version 17 analyzed the data calculating the Pearson's correlation to test the association between the variables and the multivariate linear regression model, considering p<0.05

Results: The patients had a median weight regain of 14.0% (min= 6%; max= 65.7%). Postoperative time was positively associated with weight regain (r = 0.39; p=0.023). The mean percentages of fat and fat-free masses were 45.1 ± 8.3% and 54.3 ± 8.1%, respectively, with a fat-free mass to fat mass ratio of 1.1 ± 0.2. The mean REE was 1424.7 ± 187.2 kcal (14 kcal/kg of the current weight), mean energy intake was 1258.6 ± 454.3 kcal, and mean protein intake was 0.9 g/kg of the ideal weight ± 0.3. Fat-free mass was positively associated with REE regardless of protein intake and postoperative time

Conclusions: These patients need low-energy diet, protein supplementation and resistance training to stimulate protein synthesis and maintain good REE

P.669
SLOW VERSUS RAPID FIBRIN GLUE FOR THE PREVENTION OF SEROMA IN ABDOMINOPLASTY

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Background: The formation of a seroma is one of the most frequent complications following an abdominoplasty. A preventive effect on seroma formation by using fibrin glue in an operation is discussed. The effect of operative fibrin sealant on the formation of seromas was investigated in patients who had an abdominoplasty. The relevance of slow versus accelerated fibrin polymerization was determined.

Methods: Two different thrombin concentrations (4 IE vs. 500 IE thrombin/ml) of the fibrin sealant were used in two groups of 60 patients. The control group consisted of 60 patients who underwent abdominoplasties without using a fibrin glue adhesion. One patient had to be excluded.

Results: Patients in the group with the slow reacting fibrin sealant (4 IE) had a significantly lower rate of seroma formation when compared to the high concentration fibrin group and the control group ($p < 0.04$ and $p < 0.05$, respectively). In addition, the amount of postoperative drainage was significantly lower in the low-dose group ($p < 0.001$). Patients with a seroma had a significantly higher resected tissue weight ($p < 0.0001$). A higher body-mass-index ($p < 0.0001$) and the amount of postoperative drainage ($p < 0.0001$) were found to be significant risk factors for the development of a seroma. The Age had no significant impact on the prevalence of complications.

Conclusion: The use of slow reacting, low-dose fibrin glue demonstrated a protective effect against the formation of a seroma following abdominoplasty. The amount of postoperative drainage was significantly lower.

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NUTRITION SUPPLEMENTATION AFTER SLEEVE GASTRECTOMY: DO MULTIVITAMINS PREVENT MALNUTRITION?

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Background: The standard recommendations for nutritional supplementation after sleeve gastrectomy consist of supplementation with multivitamins (MV), calcium, vitamin D and B12. Yet, the benefits of such a broad supplementation after a non-malabsorptive procedure remain unknown, especially in the light that many patients have low adherence to such recommendations. The purpose of this study was to evaluate the effects of nutritional supplementation with MV on risk for malnutrition, patient satisfaction and quality of life.

Methods: From our prospectively collected database, we selected patients who underwent sleeve gastrectomy and were taking MV as recommended. These patients were compared with such who discontinued the recommended supplementation. We investigated the effects on risk for malnutrition as well as patient's satisfaction and quality of life (Aldert-Moorehead-Questionnaire) 1 year after surgery. Lab-values were defined as deficiencies, when they were out of the standard range assessed by our laboratory.

Results: Twenty-nine patients (15 with /14 without MV-supplementation) with no preoperative differences were included into this study. There were no differences regarding the risk for malnutrition, related to the total number of deficiencies between these two groups (1,6 vs 1,5; $p = 0,952$). Patient who followed the recommended MV-supplementation had a higher quality of life than such who did not (1,8 (good quality) vs 2,1 (very good quality); $p = 0,226$), especially regarding the general feeling (0,29 vs 0,38; $p = 0,007$) as one part of the questionnaire. Furthermore, it appears that patients taking supplementation tended to be more satisfied with the follow-up program (79% vs 93%; $p = 0,276$) and appeared more frequently in the outpatient clinic (3/4 vs 4/4 (visits per year); $p = 0,296$).

Conclusions: No nutritional supplementation after sleeve gastrectomy does not increase the risk for malnutrition 1 year postoperatively, raising the question if a broad general supplementation is justified in these patients. However, regular nutritional supplementation improves quality of life and may be associated with closer follow-up visits, which are necessary for tight adjustment of nutritional supplementation.

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THE ROLE OF BARIATRIC SURGERY IN MORBIDLY OBESE PATIENTS WITH INFLAMMATORY BOWEL DISEASE

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Background: Bariatric surgery is considered as being contraindicated for morbidly obese patients who also have inflammatory bowel disease (IBD).

Objective: The aim of our study was to report the outcomes of bariatric surgery in morbidly obese IBD patients

Setting: Departments of surgery at two university-affiliated medical centers

Methods: The prospectively collected data of all the patients diagnosed as having IBD who underwent bariatric operations in two medical centers between 10/2006 and 1/2014 were retrieved and analyzed.

Results: One male and nine female morbidly obese IBD patients (eight with Crohn's disease and two with ulcerative colitis) underwent bariatric surgery. Their mean age was 40 years and their mean BMI was 42.6 kg/m². Nine of them underwent a laparoscopic sleeve gastrectomy (LSG) and one underwent a laparoscopic adjustable gastric band (LAGB). Eight patients had obesity-related comorbidities, including type 2 diabetes, hypertension, sleep apnea, osteoarthritis, etc. After a median follow-up of 46 months (range 9–67), all the patients lost weight, with an EWL of 71%, and ten out of 18 obesity-related comorbidities were resolved. There was one complication not related to IBD, and no IBD exacerbation.

Conclusions: Bariatric surgery was safe and effective in our morbidly obese IBD patients. The surgical outcome in this selected patient group was similar to that of comparable non-IBD patients.

P.672
PATIENTS WITH T2DM APPLYING FOR BARIATRIC / METABOLIC SURGERY HAVE HIGHER BMI THAN BARIATRIC PATIENTS WITH NO COMORBIDITIES.

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Background: Bariatric/Metabolic surgery (BMS) is the most effective treatment of type 2 diabetes mellitus (T2DM). It is unclear how characteristics of patients actually receiving BMS match the characteristics of patients who would benefit the most from the BMS.

Methods: A retrospective cohort study on 168 Czech obese diabetics and 112 Czech morbidly obese patients without T2DM or any other comorbidity who had undergone various BMS procedures between 2003 and 2013.

Results: Diabetic patients are older ($p < 0.01$, MW) and have higher BMI ($p < 0.05$, MW) than patients without comorbidities. Follow-up rate of 83%, 30-day mortality 0%. One year after the surgery the T2DM was worsened, has not changed, improved or resolved in 0%, 21%, 51% and 27% of patients, respectively. The metabolic effect was lower in band as compared to sleeve and bypass ($p < 0.01$, KW). After gastric bypass majority of obese diabetics has achieved T2DM resolution within one year. The EWL was higher in non-diabetics.

Conclusions: Even though indication criteria allow patients with severe comorbidities to have BMS at lower BMI, patients with T2DM in the Czech Republic come for BMS heavier and older than „healthy obese“ patients. Deeper mutual interdisciplinary cooperation of diabetologists and metabolic surgeons could lead to a better match between the best candidate profile (obese diabetic) and the most effective treatment method (BMS).

P.673
NONALCOHOLIC FATTY LIVER DISEASE AND ITS COMPLICATIONS. ASSESSING POPULATION AT RISK FOR HEPATOCELLULAR CARCINOMA.

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Background: The aim of the study is to highlight correlations between biochemical markers and different degrees of liver inflammation or fibrosis revealed by liver biopsy in morbid obese patients. We also want to emphasize that hepatocellular carcinoma development is increasingly associated with obesity, metabolic syndrome and nonalcoholic fatty liver disease.

Methods: Retrospective study on patients operated for morbid obesity in our surgical unit. We included only the obese patients which are candidates for bariatric surgery who do not have other risk factors for liver disease and to whom liver biopsy was taken during metabolic surgery.

Results: All 20 patients in our study had different stages of nonalcoholic fatty liver disease: 8 had pathological features of steatohepatitis, 11 patients had hepatic steatosis and for 1 patient the pathologic report showed lesions of evolving cirrhosis. Regardless of pathological changes of the liver, none of the patients showed changes in classical liver function blood tests; moderate insulin resistance was detected in 4 cases of steatohepatitis and increased ferritin levels in 46,15% of the patients.

Conclusions: Hepatic impairment in obese patients, ranging from simple steatosis to steatohepatitis or even cirrhosis, does not always have an impact on classical hepatic biological tests. The most literature data stress out the involvement of adipokines in the development

and progression of steatosis as the hepatic expression of metabolic syndrome occurring in obese patients. These proteins also seem to be related to the HCC occurrence. However, none of these studies show the exact pathway followed by the hepatic cell from simple fatty liver to hepatocellular carcinoma. In conclusion, finding and selecting risk population to deve

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READMISSION RATE AFTER ROUX – Y – GASTRIC BYPASS

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Background: The number of laparoscopic bariatric procedures being performed worldwide has increased dramatically in the past decade. Because of limited health-care resources, hospital administrators are emphasizing readmission rate. Complications resulting in hospital readmission are important concerns for those considering bariatric surgery.*

Methods: A retrospective study to evaluate the readmission rate after primary Roux Y Gastric Bypass (RYGBP) between 2009 and 2013. Number and indications of admissions, the complementary work up, the final diagnosis and treatment were analyzed.

Results: Between 2009 and 2013, 592 patients underwent RYGBP at our institution. 181 patients (30.5 %) were readmitted at least once. There were 66 patients (36.46 %) who required a second admission and 25 patients a third one (13.8 %). Readmission occurred early (< 30 days) for 19 patients (10.4 %). The most common clinical reason for readmission was abdominal pain (139 patients – 76.8 %). Hyperleukocytosis was detected in 27 patients (14.9 %). The final diagnosis was: non-specific abdominal pain - 35 cases (19.3 %), anastomotic ulcer – 38 cases (21 %); biliary problems – 19 cases (10.5 %); internal hernia – 15 cases (8.3 %); incisional hernia – 15 cases (8.3 %); small bowel obstruction – 14 cases (7.7 %); dysphagia – 13 cases (7.2 %); wound infection – 13 cases (7.2 %); stenosis – 7 cases (3.8 %); anastomotic leaks – 6 cases (3.3 %); non-specific related disease – 6 cases (3.3%). 144 patients (79.5 %) were admitted to the surgical ward from the emergency department and the remaining 36 were hospitalized during the follow up in outpatient clinic. 71 out of 181 required surgical exploration (39.22 %), 47 out of them in emergency setting.

Conclusions: Readmission rate after bariatric surgery is not negligible. Abdominal pain is the most common presenting symptom with anastomotic ulcer representing the most common diagnosis.

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CAN LAPAROSCOPIC SLEEVE GASTRECTOMY BE CONSIDERED FOR PREVENTION OF METABOLIC SYNDROME?

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Background: to study the effects of weight loss after laparoscopic sleeve gastrectomy (LSG) on glycaemic and lipidic metabolisms in obese patients with or without type 2 diabetes mellitus.

Methods: the retrospective study included 60 concomitant subjects submitted to laparoscopic sleeve gastrectomy in Ponderas Hospital between February – June 2013, with a median body mass index of 41,75 kg/m². BMI, waist circumference, glycaemic and lipidic parameters were studied in the first 6 PO months.

Results: statistically significant improvements were noticed after six months postoperatively in BMI values (p<0,0001), waist circumference (p<0,0001), glycaemic levels (p<0,0001), insulin (p<0,0001), C-peptide (p<0,0001), high density lipoprotein in males (p<0,0019) and triglycerides (p<0,0001). The glycaemic control was significantly improved starting with postoperative day 10.

Conclusions: an improvement of glucose and lipidic metabolism associated with an important weight loss enables us to consider that sleeve gastrectomy is an efficient method for improving the metabolic status even in normoglycaemic patients. These results can also explain the remission of T2DM and even its prevention in patients with morbid obesity, thus considering that LSG can be indicated for prevention of metabolic syndrome.

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BARIATRIC SURGERY IS SAFE AND EFFECTIVE IN SEPTUAGENARIANS.

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Background: With increasing popularity of bariatric surgery, bariatric surgeons increasingly get requests for surgery from patients in extreme age group. Septuagenarians are a special age group. The surgical risks can be higher and the benefits proportionately lower. Even though surgery may not result in significantly increased life span for these patients, it still has the potential to improve the quality of life of these patients. Despite this, surgery in this group of patients continues to be controversial. The purpose of this study was to evaluate our results with this specific group of patients.

Methods: We interrogated our prospectively maintained database to find our results with all bariatric surgical procedures in patients >70 years old.

Results: There were a total of 9 patients. Seven (77.7%) were females. The mean age was 70.3 years (range 70 -72) and the mean BMI was 50.2 (range 43.2-54.1) kg/m². Roux-en-Y Gastric Bypass was performed in 7(77.7%) patients, Sleeve Gastrectomy in 1(11.1%) patient, and Mini Gastric Bypass in 1(11.1%) patient. There was no anastomotic leak or mortality in this series. There were no early (30 day) and late (>30 day) readmissions or reoperations. Patients achieved an excess weight loss of 53.4 %, 63.8 %, 60.6% at 6, 12, and 24 months respectively. Of the 5 diabetic patients, 1 patient had complete resolution and 4 had improvement in diabetes. Hypertension resolved in 2 patients and 3 patients had improvement in hypertension.

Conclusions: Bariatric Surgery is safe and effective in septuagenarians.

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EFFECT OF OMENTECTOMY ON METABOLIC SYNDROME IN PATIENTS WITHOUT BARIATRIC PROCEDURE.

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Background: To assess the effect of visceral fat reduction by omentectomy on metabolic syndrome, acute-phase reactants, and inflammatory mediators in patients with obesity but without bariatric surgery procedure.

Methods: 16 patients were operated with open laparotomy technic. 5 patients were operated laparoscopically. In both types of operations great omentum was delated from abdominal cavity of obese patient during simultaneous general surgery operations (cholecystectomy, hernia repair). Levels of interleukin, C-reactive protein, tumor necrosis factor, leptin, adiponectin, glucose, total cholesterol, HDL cholesterol, LDL cholesterol, and triglycerides, as well as clinical characteristics, were evaluated before surgery and at 1, 3, 6, 12 months after surgery.

Results: Baseline characteristics were comparable in patients with and without simultaneous omentectomy. Mean operative time was significantly higher in the group of patients who underwent omentectomy ($P < 0.001$). Median weight of the omentum was 824 ± 348 g. Glucose, total cholesterol, LDL, and triglycerides significantly improved in group with simultaneous omentectomy during first six months of follow-up. Acute-phase reactants, and inflammatory mediators also improved in group with omentectomy. However there were no any statistical changes in group without omentectomy when compared with basal values.

Conclusions: Omentectomy has an impact on the components of metabolic syndrome in patients who underwent simultaneous general surgery procedure and omentectomy.

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MULTIMODAL TREATMENT FOR SLEEVE GASTRECTOMY'S FISTULAS

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Background: Gastrointestinal (GI) fistulas are the most feared complication of sleeve gastrectomy for obesity. Outcome is largely determined by fistula management options.

Methods: This study includes 13 patients (11 women and 2 men, average BMI 44,7 kg/m²) operated between February 2010, and February 2013, that developed a fistula after sleeve gastrectomy. Based on patient charts, the initial treatment option, fistula recurrence and subsequent management were evaluated.

Results: All patients were treated with empiric broad spectrum antibiotics and prompt resuscitation upon diagnosis of GI fistula. Ten patients had a conservative approach (endoscopic with/without abscess percutaneous drainage) and three patients had a combined approach (endoscopic plus surgical drainage). Nine fistulas did not recur (average closure time: 132,3 days; average procedures: 4), 2 had an early recurrence and 2 evolved into chronic fistulas. In the chronic fistulas group, a Roux-en-Y limb anastomosis to the fistula defect was performed and was successful in both cases (average closure time: 16,5 days). No mortality was recorded in this series.

Conclusions: Multidisciplinary approach of these patients leads to good results reducing post-operative mortality. The use of a Roux-en-Y limb placement is an efficient surgical strategy, allowing faster recovery. After failed endoscopic treatment, this technique is a first-line procedure for sleeve gastrectomy's fistulas.

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LAPAROSCOPIC MANAGEMENT OF COMPLICATIONS AFTER BARIATRIC SURGERY

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Background: Grade 3-5 CTCAE complications occur during early phase of learning curve of laparoscopic metabolic surgery with a rate of 6%. Management of these complications includes a wide variety of surgical and non-surgical maneuvers.

Methods: 73 patients operated between June 2012 and December 2014 were included. Three patients developed complications 3 – 4 after surgery.

Results: A 24 years old male patient presented nausea and vomiting in the first postoperative day and an intraabdominal hematoma due to gastric stump hemorrhage mimicking a gastric volvulus successfully managed laparoscopically. Another 34 years old male patient presented with extensive ecchymosis of the anterior abdominal wall with no evidence of intraperitoneal blood (probably due to one trocar site hemorrhage), the second day after surgery conservatively treated. The third patient was a 53 years female patient with comorbidities: sleep apnea, systemic lupus erythematosus which developed a first episode of hemorrhage in the first postoperative day and laparoscopic hemostasis was provided. One week after discharge the patient was readmitted with signs of hypovolemia and intraperitoneal bleeding. A new laparoscopic exploration was needed and it revealed hemoperitoneum without evidence of source. The patient developed a left upper quadrant abscess managed by ultrasound guided drainage; she was discharged with no signs of sepsis or hemorrhage.

Conclusions: Considering the particularities of these cases all the efforts should be made to manage the postoperative complications with minimally-invasive methods and to avoid a laparotomy.

P.688

A NOVEL PRECONDITIONING TREATMENT IN GIANT OBESE PATIENTS WITH BMI 70 KG/M2 AND ABOVE: BRANCHED CHAINED AMINO ACID INFUSION COMBINED WITH GLP-1 ANALOGUES AND HYPOCALORIC DIET

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Background: Patients with a BMI > 70 kg/m² and more need a pre-surgical conditioning treatment to achieve technical operability. The approved preconditioning therapy until now is the intragastric balloon, which lasts for 6 months and needs an additional month of further surgical treatment delay, due to the therapy-resulting hypertrophy of the stomach wall. In patients with life-threatening physical condition a quicker weight reducing intervention than the far too time consuming intragastric balloon therapy is needed. This forced us to develop new therapeutical pattern. We chose the combination of a GLP-1 analogue with a branched chained amino acid infusion and a hypocaloric diet. Thus we achieved impressive weight loss in patients with giant BMI about 70 kg/m² within approximately 3 weeks.

Methods: Twenty patients with a mean BMI of 73,29 kg/m² were treated with this scheme. For the first three days 1,2 mg of a GLP-1 analogue daily was injected subcutaneous. Subsequently dosage was elevated to 1,8 mg per day. In addition the patients received daily a commercially obtainable amino acid infusion with high content of leucine. The oral nutritional caloric intake was reduced to above 800 kcal.

Results: Mean treatment time was 20,1 day. All patients were surgical treated with a vertical sleeve gastrectomy with a mean BMI of 66,17 kg/m². These results retrospectively were compared to a corresponding patients group, which underwent pre-surgical intragastric balloon therapy.

Conclusions: The new scheme with GLP-1 and amino acid infusion was superior in necessary treatment duration (20 d vs. 216d) and in achieved absolute weight reduction (26,1 kg vs 21,5 kg).

P.690

DOES BARIATRIC SURGERY MODIFY THE LIPIDIC METABOLISM?

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Background: The goals of bariatric surgery are to improve the quality of life by lowering BMI but also to treat its comorbidities consequently prolonging the life expectancy. One of the mechanisms of improving comorbidities is metabolic response after surgery. The aim of our study is to evaluate the impact of bariatric surgery on main components of lipidic metabolism

Methods: 85 obese patients from a prospectively collected database, operated between June 2012 and March 2015 were included. Basal and 1, 3, 6 and 9 months after surgery serum levels of triglycerides and cholesterol with its fraction LDL, VLDL and HDL were recorded.

Results: Mean age was 40,06 (range 28 – 63 years), mean BMI was 43,1 kg/m² (range 35 – 59). Main intervention was gastric sleeve 70 out of 73 (95,89 %). CTCAE 3-4 morbidity rate was 4,1%. Mean follow-up was 9 months (range 1 – 20). Despite the decreasing trend of cholesterol we could not find a statistically significant correlation between the basal and follow-up levels. Triglyceride levels have decreased between the 3 and 6 months of follow-up and the difference has got statistical relevance.

Conclusions: The impact of bariatric surgery was mainly on triglyceride levels. The main drawback of the study was the small lot of patients. A larger study is warranted.

P.694 MISFIRE IN LAPAROSCOPIC STAPLED BARIATRIC SURGERY. PILOT ERROR OR TECHNICAL FAILURE: WHO'S TO BLAME FOR IT?

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Background: Use of laparoscopic mechanical suture increased dramatically in the last 20 years. Use of staplers in laparoscopic bariatric surgery is mandatory in order to perform minimally-invasive, complex and routine procedures that include ligation, division, resection, anastomosis and fascial closure.

Methods: Malfunction is defined as failure of the device to meet its performance expectations. Problems that one can encounter during stapling are related to stapler, cartridge, reload or operating room personnel.

Results: The incidence of these events is very low, estimated to 0.003% but the implications on postoperative evolution vary from little or no consequences to catastrophic events. User error can be attributable to personal experience or misjudge of staple size, length, tissue thickness. Device failure to form properly and suture line separation or device specific malfunctions (staples partially firing or staples misfire and not releasing) are most common aspects. A survey of misfire events was conducted through the Romanian bariatric surgical community, with high positive response of such events (over 90%).

Conclusion: Report of such events is mandatory in order to improve both user experience and device function as well.

P.699 ANALYSIS OF LIPID PROFILE OF PATIENTS UNDERGOING SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS

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Background: Lipid disorders are common in obese patients, being an important risk factor for coronary syndromes. Bariatric surgery can reduce this risk. Sleeve gastrectomy (SG), a purely restrictive technique, seems to be worse than Roux-en-Y gastric bypass (RYGB) to improve lipid profile. The objectives were to evaluate lipid profile of obese, who underwent SG and RYGB and also to compare lipid improvement of patients who underwent SG and RYGB.

Methods: 334 patients who underwent SG and 178 patients who underwent RYGB were evaluated in a retrospective cohort with prospective analysis. Serum levels of total cholesterol, LDL, HDL and triglycerides were measured preoperatively and at 3, 6, 12 and 24 month of follow-up.

Results: At baseline 80% of patients had at least one abnormality among the lipid measurements. Two years after surgery, total cholesterol, LDL, HDL and triglycerides levels improvement were seen in the group who underwent RYGB. In the group who underwent SG, total cholesterol, HDL and triglycerides levels improved within two years after surgery.

Conclusions: Both techniques improved lipid profiles, but RYGB achieved better rates.

P.700
LAPAROSCOPIC ADJUSTABLE GASTRIC BAND WITH EXTENDED IMBRICATION: ONE-YEAR COMPARISON OF WEIGHT LOSS OUTCOMES

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Background: Laparoscopic adjustable gastric banding (LAGB) has undergone modifications over the years to improve outcomes. The present study compares the addition of extended imbrication to traditional placement of the Lap-Band™.

Methods: A retrospective cohort analysis of 1,121 patients from two surgical practices was conducted. Patients had undergone either traditional placement of Lap-Band™ (TLB) or Lap-Band™ with extended imbrication (LBI). Average pre-surgical BMI for TLB (n=730) was 43.68 kg/m² and for LBI (n=391) was 44.68 kg/m². BMI, %EWL, and %Total Body Weight Loss (%TBWL) were compared at baseline, 3 (M3), 6 (M6), 9 (M9) and 12 (M12) months. Data were analyzed using a mixed effects repeated measures ANOVA.

Results: Change in BMI was greater for LBI compared to TLB (F=12.04, p=.0005) at M6 (-6.9 versus -6.1), M9 (-8.3 versus -7.3) and M12 (-9.3 versus -8.4). %EWL was greater for LBI compared to TLB (F=6.88, p=.0088) at M6 (-39.7 versus -35.6), M9 (-47.6 versus -43.4) and M12 (-52.5 versus -49.1). %TBWL was greater for LBI compared to TLB (F=11.48, p=.0007) at M6 (-15.6 versus -14.0), M9 (-18.7 versus -16.9) and M12 (-20.8 versus -19.2). LBI had two explants. There were no mortalities.

Conclusions: The addition of extended vertical imbrication to a standard Pars Flaccida technique of band placement demonstrates overall improvement in weight outcomes during the first year without adding an increase in explantation or complication rate. Strong consideration of greater utilization of this technique should occur.

P.701
LAPAROSCOPIC SLEEVE GASTRECTOMY: COMPLICATIONS AND SHORT-TERM RESULTS.

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Background: In recent years laparoscopic sleeve gastrectomy has become one of the most frequently performed bariatric operations in Europe. This procedure can be used as a stand alone procedure for treatment of malignant obesity or as a first step in the attempt of accomplishing a massive weight reduction. In this retrospective study we evaluated the complications and 3 year results obtained in patients that underwent laparoscopic sleeve gastrectomy.

Methods: A total of 178 patients were included in this retrospective study. Patients fulfilled the inclusion criteria and were all informed of the probable complications. All patients were operated laparoscopically with a standardized surgical technique.

Results: All patients were operated laparoscopically. The mean operative time was 72 minutes. No surgical bleeding occurred within the peritoneal cavity. No clinical leaks were identified intraoperatively using the saline submersion test. The percentage of excess weight loss ranged from 21.85% to 75.47% in the follow up period. Complications were categorized to minor and major, hemorrhage, abscess, fluid collection and leakage being among them. Ten re-operations and three deaths were reported.

Conclusion: Results from this series of patients indicate laparoscopic sleeve gastrectomy to be rather safe, reproducible, and efficacious as a stand-alone bariatric procedure in achieving and maintaining weight loss in short term follow up. However, the disadvantages of the procedure such as its irreversibility and its major complications place under discussion the common practice and need to be associated with thorough patient update and consent.

P.707
SLEEVE GASTRECTOMY IN PATIENTS WITH BMI BETWEEN 30-35

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Background: The laparoscopic sleeve gastrectomy is a well-recognized bariatric procedure. There are a large group among obese patients, with grade I obesity (BMI of 30-35 kg/m²) who are not candidates for bariatric surgery, based on NIH. However it is well known, that many of these patients have metabolic syndrome and increased cardiovascular risk.

In this report, we show our experience performing LSG in patients with BMI between 30 and 35 and show the results in regards to safety, weight loss and resolution of their comorbidities

Methods: Retrospective study from 2006-2014. We analyzed 347 patients, including gender, age, comorbidities, preoperative BMI, EWL, EWL% and BMI postoperatively at 12 and 24 months, morbidity and mortality.

Results: Mean preoperative BMI 34.1 (30, 9–34, 9), mean weight 90.6 (73–107) kg. Mean postoperative BMI at 24 months was 27, surgical time 86.2 (40-120) min. Comorbidities: Insulin resistance 76.2%, Dyslipidemia 66.2%, Fatty liver 57.1%, Hypertension 33.4%, OSA 17%, T2DM 7.4%. Remission: Insulin resistance 90%, Dyslipidemia 90%, Fatty liver 70%, Hypertension 70%, Obstructive sleep apnea 70%, T2DM 82% and improvement 18%. Morbidity: 7 (2%); Hemoperitoneum = 5, Portal vein thrombosis = 1, Bile peritonitis (Lushka-cholecystectomy) = 1, Leaks = 0, Reoperations = 0, Mortality = 0.

Conclusions: LSG is a safe and reproducible technique in patients with BMI under 35, with low morbidity and mortality. In our series this results are very encouraging with excellent weight loss in the midterm. LSG is a good surgical alternative in this group of patients.

P.710 ETHNIC AND GENDER DIFFERENCES ON WEIGHT LOSS AFTER BARIATRIC SURGERY BETWEEN JEWISH AND ARAB IN ISRAEL

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Background: The objective was to describe differences in weight loss and gender between Jewish and Arab patients in Israel 6 months after bariatric surgery.

Methods: A retrospective analysis of data collected prospectively on a total of 9,198 patients underwent bariatric surgery between June 1, 2013 and April 30, 2014. The data were retrieved from the Israeli bariatric surgery registry. Factors associated with percentage of excess weight loss (%EWL) were studied using a step-down hierarchical linear regression model.

Results: There were 2,951 (32%) male patients [(mean age 43.4±12.4), 2,568 (87%) were Jews and 383 (13%) Arabs]. There were 6,247 (68%) female patients [(mean age 41.3±12.3], 5,056 (81%) were Jews and 1,191 (19%) were Arabs]. Mean BMI was significantly higher among Arab males when compared with Jewish (43.7±5.5 vs. 41.8±5.3, p=0.0001) and among Arab females when compared with Jewish (43.0±4.9 vs. 41.9±5.3; p=0.0001). Mean %EWL at 6 months was higher among males compared with females (65.2%±21.0% vs. 61.7%±19.8% respectively, p=0.002) and was higher among Jews compared with Arabs (63.0%±21.6 vs. 59.3±20.7 p=0.002). Step-down hierarchical regression indicated that %EWL was significantly associated with male gender (p=0.003), but not significantly with ethnicity (p=0.1).

Conclusions: Bariatric surgery offers good weight loss in all patients. While there may be greater %EWL in male patients, no ethnic difference in successful weight loss exists.

P.713 EXPRESSION OF FATTY ACID TRANSPORT PROTEINS AND THE CONTENT OF BIOACTIVE LIPIDS IN HUMAN ADIPOSE TISSUE

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Background: One of the reasons of triacylglycerols (TAG), diacylglycerols (DAG) and ceramides (CER) is accelerated cellulipetal transport of LCFA dependent on fatty acids transport proteins. It is assumed that DAG and CER, but not TAG, directly facilitate the development of cellular insulin resistance and obesity. Aim: to compare expression of fatty acid transport proteins and the content of bioactive lipids in obese subjects with and without metabolic syndrome.

Methods: In this study, total, membrane and mitochondrial expression of FAT/CD36 and FABPpm as well as content of TAG, DAG and CER were assessed in visceral and subcutaneous adipose tissue of 32 obese patients with (N=20) and without (N=12) metabolic syndrome.

Results: We demonstrated that in obesity total and membrane expression of FAT/CD36 and FABPpm had a tendency to higher values in visceral and subcutaneous adipose tissue and the expression was higher in obese subjects with metabolic syndrome. Most likely the increase of those fatty acid transporters results in the increase of TAG accumulation in visceral fat. The higher content of TAG in visceral adipose tissue was observed in obese patients without metabolic syndrome but the content of CER was higher in patients with metabolic syndrome

Conclusions: Accumulation of CER and not TAG participates in the development of metabolic diseases. Excessive intracellular accumulation of lipids is the result of decreased mitochondrial expression of FAT/CD36 and FABPpm caused by decreased number of cellular mitochondria.

P.714 BOOGIE INDUCED THORACIC ESOPHAGEAL PERFORATION DURING LSG, A CASE REPORT AND LITERATURE REVIEW

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Introduction: Post Bariatric surgery esophageal perforation is a diagnostic and therapeutic challenge because of the rarity of the condition and the variability in presentation.

Objectives: Analysis of successful management and literature review of a long full thickness esophageal perforation during LSG.

Methods: A 33 years old Female patient with a 43 BMI, scheduled for LSG. Preoperative investigations were normal except Ba Meal which showed small sliding hiatus hernia. During boogie introduction, the anesthesiologist experienced an unexpected resistance without reaching the stomach. Intraoperative upper GI was performed, revealed long 7cm full thickness mid esophageal perforation.

Results: Trial of transhiatal repair failed (inaccessible). LSG was aborted and left lateral thoracotomy was performed. The repair was done in layers (mucosal then seromuscular) reinforced by intercostal muscle flap. Ryle tube and 2 chest tubes inserted. In the ICU, patient received TPN, antibiotics, anticoagulants and antifungal treatment. High grade fever was experienced on the 4th day. CT and gastograffin meal showed no leakage, but showed severe bilateral lobar pneumonia. Oral fluids started on the 9th day. Finally the patient was discharged on the 15th day after chest tubes removal.

Conclusion: Esophageal perforation is a high mortality complication (34% following operative management). The key for successful management is the timing of diagnosis (<24h). Repair in layers with intercostal muscle flap offers the best management for long esophageal tears. Esophageal stents is appropriate for patients who can't tolerate more extensive surgery and for advanced mediastinal sepsis.

P.723 ENDOSCOPICALLY TREATED GASTRIC BLEEDING DEVELOPED WITHOUT BAND EROSION AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING – CASE REPORT

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Background: Laparoscopic adjustable gastric banding is the most common bariatric surgical procedure performed in Korea. We report a rare case of gastric bleeding after laparoscopic adjustable gastric banding (LAGB) without band erosion.

Methods: Twenty-one year old female came to ER for hematemesis, melena and abdominal pain. She underwent laparoscopic adjustable gastric banding in 20 days and at that time her BMI was 27.1kg/m². The band had not been adjusted. Blood pressure was 100/50 mmHg, heart rate was 118/min, respiratory rate was 22/min, body temperature was 38.4°C. Her hemoglobin was 9.1g/dl.

Results: Esophagogastroduodenoscopy showed gastric bleeding without erosion. It was successfully treated with endoscopic hemoclips and detachable snare.

Conclusions: Gastric bleeding after LAGB is known to be associated gastric erosion. This case was a rare case of gastric bleeding without erosion which was successfully treated with endoscopic interventions. It will be helpful to manage gastric bleeding properly after laparoscopic adjustable gastric banding.

P.725
LAPAROSCOPIC PRIMARY CLOSURE OF PERFORATED MARGINAL ULCER AFTER GASTRIC BYPASS: 8 CASES SERIES REPORT.

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Background : The reported incidence of marginal ulcer after Roux en Y gastric bypass (RYGB) is of 0.6%-16%. The preferred management of perforated marginal ulcer (PMU) is debated. We report a series of laparoscopic primary closure of PMU without anastomotic revision. The aim was to demonstrate the safety and effectiveness of this approach and to determine whether any causative factors were present.

Methods: A retrospective review of prospectively collected data of all bariatric patients at a tertiary university referral center was performed from January 2010 to September 2014. The complete records of patients with a PMU were examined and analyzed for treatment, outcome, and possible underlying causes of the marginal ulcer perforation.

Results: Over a five years period eight patients (7 female; 1 male) were diagnosed with a perforated marginal ulcer. Two patients (25%) were already diagnosed with a marginal ulcer treated by proton pump inhibitor (PPI), one of them underwent previous endoscopic balloon dilation for anastomotic stricture one year before the perforation. The median time to perforation after the RYGB was 42 months (range, 2–107 months). The median time between the onset of symptoms and the surgery was of 18 hours (10-24). The median age 40.5 years (21-62). One patient (12.5%) was an active heavy smoker, two patients (25%) received steroids (1) and NSAID (1), three patients (37.5%) were diabetic. None of the patients were *H. pylori* positive before the RYGB. All patients underwent laparoscopic exploration with primary closure of the ulcer. One patient (12.5%) had conversion to laparotomy. In all the patients the perforation was located at the jejunal side of the anastomosis. The median hospital stay was of 5 days (2-8). All patients were maintained on 40 mg of PPI post-operatively and followed for 1–48 months (mean, 16 months). There was no major morbidity and no mortality. None of the patients presented again ulcer related problems during the follow up.

Conclusions: Perforated marginal ulcer represents a significant complication of RYGB. In our review we found laparoscopic primary closure repair to be a safe and effective treatment in an emergency setting with short hospital stay, no morbidity and no mortality. If onset of symptoms is less than 24 hours primary closure may avoid more advanced and invasive procedures. As reported in the literature we identified smoking, use of NSAID, steroids and diabetes as risk factors. Patients should be educated to reduce risk factors for perforation, as prolonged proton pump inhibitor therapy may not completely prevent this complication.

P.736
GLUCOSE LEVEL BEHAVIOR IN TYPE 2 DIABETIC PATIENTS WITH GASTRIC CANCER SUBMITTED TO GASTRECTOMY AND ROUX EN Y RECONSTRUCTION: THE FOREGUT HYPOTHESIS

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Background: Bariatric surgery has been shown to be effective in the treatment of obesity-related comorbidities, including diabetes mellitus type 2 (T2DM). There is intense debate about the mechanisms involved in lowering blood glucose in these patients. Undoubtedly, weight loss plays an essential role in this improvement, but it is not an isolated factor. Several studies in obese patients undergoing Roux-Y gastric bypass showed significant decrease in blood glucose levels after surgery, suggesting that weight loss is not the only factor that influences glucose homeostasis. These studies show that the change in the passage of food through the gastrointestinal tract after bariatric surgery has an important role in the pathophysiology of T2DM. It is known that the ileum is responsible for the secretion of hormones which influence the production and secretion of insulin by the pancreas (GLP-1 and PYY). These hormones are responsible for satiety, inhibit gastric emptying and intestinal motility. GLP-1 stimulates insulin gene expression and enhances all steps of their biosynthesis, as well as having anti-apoptotic and proliferative effect on pancreatic β cells. Likewise, there is a chance that the exclusion of the proximal intestine passage of food also influences the regulation of blood glucose. However, no one knows exactly what is this role. The non-obese patients (BMI <30) with T2DM who underwent total or subtotal gastrectomy and Roux-en-Y reconstruction in the treatment of gastric cancer correspond to this analysis.

Methods: It were retrospectively analyzed the charts of 47 T2DM patients with gastric adenocarcinoma who underwent total or subtotal gastrectomy with Roux-en-Y reconstruction. Fourteen were excluded because they did not full fill the inclusion criteria, which were: Be over 18 years old, diabetic for over 1 year, BMI below 30kg/m². Exclusion Criteria: Conducting pancreatotomy associated gastrectomy; postoperative death under one year after surgery; The following data were analyzed preoperatively and postoperatively (at least 2 years): Weight; Height; BMI; Fasting glucose; Use of hypoglycemic drugs. Wilcoxon test was chosen for statistics analyses ($P < 0,05$). These records were analyzed following a previously established registration protocol, and additional information was obtained by familiar or personal interviews (verified by a Ethics Commission).

Results: There were 15 males (45,45%) and 18 females (54,55%) mean age 64,61 \pm 8,99 years, range 44 - 86 years. The mean follow up time was 43,94 \pm 26,65 months, range 12 – 120 months. Subtotal gastrectomy was performed in 21 patients (63,64%) and Total in 12 (36,36%). Mean BMI were 25,71 \pm 4,17 Kg/m² and 23,34 \pm 4,67 Kg/m² preoperatively and postoperatively, retrospectively. Mean glucose levels were 152,73 \pm 72,11 mg/dl and 154,12 \pm 86,59 mg/dl preoperatively and postoperatively, retrospectively. The use of hypoglycemic drugs was unchanged in 16 patients (48,48%); 12 patients (36,36%) had their dose medication increased or associated with another hypoglycemic drug and only 5 patients (15,15%) actually stopped taking any drug or had the numbers of hypoglycemic drugs decreased.

Conclusions: There were no major complications and no death in the first year of follow up. Glucose levels were not significantly altered after operation ($P = 0.432$). Regardless of BMI had a significant decrease after surgery ($P = 0,02$), only a few patients had an improvement on their diabetic status and therefore ceased or diminished medicament treatment for *Diabetes mellitus*. Duodenal diversion by itself does not improve glycemia behavior in diabetic patients with BMI below 30kg/m². Thus, further studies are needed to isolate the contribution of foregut hypothesis on the improvement of glucose metabolism following RYGB on lean patients.

P.737
THE NKX6.1 ANTIBODY SHOWS THAT BETA CELLS DO NOT LOSE THEIR REGENERATIVE CAPACITY WITH THE DEVELOPMENT OF DIABETES.

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Introduction: The time of evolution of type 2 diabetes mellitus (T2DM) is essential for the remission of this condition, after metabolic surgery. It is considered that beta cell mass has an irreversible loss in the natural developing of diabetes. However, many studies describe the beta cell regeneration ability. This aspect again poses reasonable doubt about the T2DM (without obesity) is an inflammatory disease.

Objective: demonstrate the effect of Duodenal Exclusion (DE) on the regeneration of beta cells pancreas.

Materials and methods: 36 Goto-Kakizaki rats (18 with ED and 18 Sham) were operated at different times. The ability to produce the remission of the diabetic condition was evidenced by an immunohistochemistry techniques using the Nkx6.1 antibody.

Results: an increased beta cell population in rats with ED compared to their counterparts of sham surgery group was observed. The rats operated at early time, showed increased cell regeneration than rats with delayed operation. Histological sections show different types of deformity in the pancreatic islets. Diverse inflammatory infiltrates and the fibrosis consume space in pancreatic tissue. This characteristic is evident in Sham rats and persists despite the surgery in the DE group with late operation.

Conclusion: the regenerative capacity of the beta cell is not lost with the evolution of the disease, but the damage of the pancreatic tissue due to inflammation, fibrosis and amyloid deposits, are cause of pancreatic dysfunction.

P.739
REMISSION OF HAS AND DIABETES AFTER SLEEVE GASTRECTOMY: STUDY IN BRAZILIAN OBESE PATIENTS.

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Background: Sleeve gastrectomy has long been used for the treatment of morbid obesity, with significant postoperative weight loss, good outcome and low morbidity. In Brazil, the usage of this procedure is increasing expressively; however there is no report analyzing its outcomes in Brazilian population. Therefore, we aimed to evaluate the effectiveness of sleeve gastrectomy on weight loss and in controlling or promoting the remission of diabetes and HAS in obesese from Brazil.

Methods: This was a prospective, single center study of patients submitted do sleeve gastrectomy. Patients were analyzed for their weight loss and comorbidities resolution after procedure. Data was collected from a multidisciplinary team, who followed patients for up to three years after surgery.

Results: 184 patients were evaluated. The mean preoperative BMI was 42,5 kg/m², and mean age was 42,6 years. The mean BMI 1 year after surgery was 31,1 kg/m² and 3 years after surgery was 29,05 kg/m², representing a mean % EWL of 76,7% and 87,8% respectively. The resolution of comorbidities was also evaluated. Prior to operation 54,8% patients displayed HAS and 33,6% were diabetic. Three

years after surgery, the number of HAS patients dropped to 5,9% and none of the patients displayed any signs of diabetes. It's important to note that no morbidity or mortality related to surgery was reported among those patients.

Conclusion: Our data points sleeve gastrectomy as a feasible and effective approach for weight reduction. The consistent and lasting weight loss and the improvement of comorbidities associated with reduced risks associated with the surgery consolidate this technique as an important option for treatment of obesity among Brazilian population.

P.742

SLEEVE GASTRECTOMY: OUTCOMES FROM A SINGLE CENTER FROM BRAZIL.

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Background: Sleeve gastrectomy has long been used for the treatment of morbid obesity, with significant postoperative weight loss, good outcome and low morbidity. However, only a few reports analyze the result of such procedure in Brazilian population. The aim of this study was to report our single-center experience with this technique regarding its outcomes and effectiveness on weight loss.

Methods: This analysis was conducted with patients treated at Fabio Viegas Institute, a center of excellence certified by SRC. The patients analyzed in the present study underwent sleeve gastrectomy at our institute from 2008 to 2014.

Results: 1600 patients underwent sleeve gastrectomy at our institute. The mean age was 49,6 years (range: 30-58). The preoperative BMI (body mass index) was 42,5kg/m², their current BMI was 29,7kg/m² and the %EWL (excess of weight loss) was 84.8%. Major complications were observed in 1,45% of the patients. Those complications were: 4 bleedings (0,4%), 1 venous thrombosis affecting the hepatic portal vein (0,1%), 2 clinically treated emboli (0,3%) and 5 leaks (0,9%), one of which has evolved to a subphrenic abscess 4 months after the surgery. We didn't report any mortality.

Conclusions: According to our analysis, sleeve gastrectomy is a safe procedure with good outcomes in weight loss and reduced complications when compared with other techniques.

P.746

SOLID FOOD INTOLERANCE DUE TO SLIDING HIATAL HERNIA AFTER BARIATRIC SURGERY

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Background: Solid food intolerance after gastric bypass(GB) and sleeve gastrectomy(SG) might be caused by stenosis, twist or sliding hiatal hernia(SHH). Aim was the assessment of our experience on pre-operative findings, revisional procedures and their outcomes in SHH-related solid food intolerance after bariatric surgery

Methods: We reviewed the prospective database of our bariatric center from November 2000 to November 2014. Patients undergoing revisional surgery for solid food intolerance after GB/SG were identified and contacted for live or telephonic follow-up in December 2014. We analyzed time of onset, pre-operative work-up, types of interventions, complications, outcomes and satisfaction.

Results: Fourteen patients (6GB+8SG) had revisional surgery for SHH-related solid food intolerance. Six initially operated in our institution, eight referred. All patients presented painful dysphagia, seven had concomitant gastro-esophageal reflux disease(GERD). Mean time of onset: 17months. All patients had pre-operative contrast study (UGI), gastroscopy and CT. SHH was preoperatively identified by CT in all cases, by UGI in 9cases and by gastroscopy in 3cases. All patients underwent Laparoscopic Hill Repair, combined with SG of dilated pouch in 1GB patient and conversion to GB of 2SG patients. Complications: 1 reoperation for sub-hepatic abscess, no mortality. Mean follow-up from revision: 18months, satisfaction 86%, dysphagia remission: 100%, GERD prevalence: 36%, acid-lowering drug use: 50%, mean BMI: 30kg/m², mean EBMI: 94%.

Conclusions: Solid food intolerance years after bariatric surgery is rare and often caused by sliding hiatal hernia. Work-up might be challenging: UGI and gastroscopy might be normal, only CT detects mediastinal ascension of gastric staple line. Laparoscopic Hill Repair as a revisional approach is safe, feasible and alleviates dysphagia in all patients. In SG patients, its association to a conversion to GB provides superior outcomes on GERD than Hill repair alone.

P.749

CHILDHOOD OBESITY: PREVALENCE AND ASSOCIATED FACTORS IN CHILDREN UNDER 5 YEARS IN A NORTHEAST CITY OF BRAZIL.

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Background: The progressive increase of overweight / obesity in children, even in younger age groups, children under 5 years, has acquired epidemic proportions, becoming a public health problem. In the last 30 years, the prevalence of childhood obesity in Brazil increased in all Brazilian regions and social classes, reaching values ranging between 5 and 18%.¹ However, the findings on the determinants of overweight are inconsistent, which can be partly attributed to methodological variations between surveys. In the Northeast, the prevalence, according Health Ministry, in 2006 was 7.9% [PNDS, 2006]. Numerous risk factors are involved in the development of overweight / obesity in children in early life, such as biological, pregnancy conditions, environmental and food. This study aims to evaluate the prevalence and determinants of overweight / obesity in children under 5 years in a city in the Northeast of Brazil and direct measures of nutrition education at the Basic Health level.

Methods: First step- perform nutritional diagnosis of children aged between 2-5 years old in the city of Fortaleza. It will be evaluated 1,200 children [$p < 0.005$; 20% CI] on the day of vaccination campaign [CV]. The city is divided into six health districts and the CV will take place in 92 health centers, covering almost 100% of the target population. Anthropometry will be held, under supervision, by students of medicine and nutrition at the University of Fortaleza [UNIFOR]. Second step- to mothers of children diagnosed with overweight / obesity, will be sent invitation letter to attend a medical / nutritional assessment to identify risk factors. The same process will be applied for two normal children of the same sex and neighborhood. Third step-will be held assess of food menu of children at home and in day care centers or schools by random sampling performed, under supervision, by nursing students of UNIFOR. Fourth step- implement nutrition education measures and food in the population assisted by NAMI / UNIFOR in primary health care.

Results: This study is scheduled to begin in May 2015, during the annual vaccination campaign's regular schedule of Fortaleza Health Department.

Conclusion: Preliminary obesity in children is a phenomenon that can be translated as a major challenge for public policy and, at the time, needs a model of care focused on health promotion, which is why we are developing this comprehensive study. We expect the results to be obtained, may implement these preventive actions.

P.750

DUODENO-JEJUNAL BYPASS LINER IN COMPLEX DIABETIC PATIENTS

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Background: The duodeno-jejunal bypass liner (DJBL) is a new endoscopic device with promising results in dealing with diabetic obese patients. We evaluated the device in complex diabetic obese patients.

Methods: We indicated the DJBL on patients with very long T2DM evolution or poor glycemic control. We excluded patients with BMI over 45kg/m². The device was scheduled for 12 months. We evaluated the evolution of T2DM during the use of the DJBL and after the retrieval.

Results: 27 patients were indicated for DJBL. 21 had the device retrieved during the study time (13 had at least 6 months of follow-up after that). 14 were women with mean age of 53.8 (range 29 to 41). They had an average of 165 months of T2DM duration (5 to 348) and HbA1c was 8.79% (5.4 to 27.5). 89% of the patient needed insulin. HbA1c improved in 1.22 units at the time of the retrieval with moderate worsening after that. Following ADA criteria, 1 patient had complete remission, 1 partial, and 3 improvement at the time of the retrieval. 6 months later just 3 patients improved. There were not severe complications and no mortality.

Conclusions: In those complex T2DM patients the effect of the DJBL is not as good as in other better profile patients. We found one subtype of patients with moderate results, but the population is too low to take any heavy conclusion.

P.754

NUTRITIONAL IMPLICATIONS IN PREGNANCY AFTER GASTRIC BYPASS SURGERY: MATERNAL AND FETAL ASPECTS

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Background: Gastric bypass beneficially influences many of the typical comorbidities in obese women and may impact, particularly, in fertility. The pregnancy after surgery must be carefully monitored due to the risk of development of nutritional deficiencies in both mother and fetus. This study aims to assess the main nutritional aspects related to pregestational and gestational periods in women undergoing bariatric surgery and their respective newborns.

Methods: Cross-sectional observational study with 15 women in a public hospital in Brasília, Brazil. Patients were invited for a personal interview and a questionnaire was applied to assess pre and postoperative data (anthropometric data, time from surgery to last menstrual period, use of supplements, and presence of comorbidities during pregnancy). We also collected some child-birth data.

Results: The average interval between surgery and pregnancy was 18.1 ± 13.3 months and there were no patients with any comorbidities. Of the 15 patients, 13 did not gain more than 11.5Kg during pregnancy. There was one case of iron deficiency and no other nutritional deficiencies were detected. Also, there were no cases of complications during pregnancy and child-birth. Twelve children were born appropriate for gestational age.

Conclusion: Pregnancy after bariatric surgery has been shown to be safe for both the mother and fetus, if it is accompanied appropriately. The RYGB may reduce the risk of developing complications during this period, bringing positive influences to the fetus, gestational age and birth weight and reducing risk of complications at birth.

P.756

QUALITY OF LIFE AFTER GASTRIC SLEEVE AND GASTRIC BYPASS FOR MORBID OBESITY.

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Background: Obesity is associated with reduced quality-of-life (QoL) and in general, QoL improves after bariatric surgery. The differential effect of each surgery on QoL is not yet fully understood, but it seems that Roux en Y Gastric Bypass (RYGB) is associated with better measures and greatest improvement in QoL.

Since SG (Sleeve Gastrectomy) numbers are increasing and the clinical short-term results seem to be comparable to RYGB, it is important to understand which of these surgeries offers greatest improvement in QoL and patient satisfaction.

Methods: We performed a systematic literature search on Pubmed in July 2014. Relevant articles were selected in a step-wise approach. The search retrieved 2482 titles that were scanned for relevance and 191 of these were selected for abstract reviewing. The abstracts were reviewed and 88 papers were selected for full text analysis.

Results: Of the 88 papers selected for reviewing, only 5 papers compared the 2 surgeries and only 15 more could be thoroughly analyzed. The reports were very heterogeneous, preventing a direct comparison of patient reported outcomes (PRO) between studies. Not only were the populations different, but also there were a wide variety of instruments used.

Although obesity has been associated with a decreased QoL, several studies report that there is no linear relation between higher BMI's and lower QoL. Improved results have been reported as early as 3 months⁵⁴ and SF-36 scores were improved in all domains in medium to long-term. The question remains whether the improvement in QoL is related to the weight loss and which factors are associated with increased patients' perceptions. Also, it is not clear if there are specific aspects in the QoL that are related to each type of surgery.

Conclusions: There is wide heterogeneity in the reporting of PRO measures after bariatric surgery, but the data is consistent with a significant improvement after both types of surgeries. Larger and better-designed studies are required in order to understand if there are significant differences in the quality of life after SG or RYGB. The development of computer assisted dynamic tools might help achieving greater discrimination in the evaluation of obesity related QoL.

P.757

GASTRIC CANCER AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: CASE REPORT

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Introduction:

Laparoscopic sleeve gastrectomy (LSG) is new bariatric operation with established efficacy and safety as stand alone bariatric operation. Theoretically, risk of gastric cancer or esophageal cancer post LSG was postulated.

There is evidence in literature of one case of gastric cancer post LSG in high-risk patient, otherwise no strong evidence of association.

Methods

36 years old patient known case of DM on insulin, dyslipidemia, and central obesity with BMI 55 underwent LSG September 2013.

Postoperative period went uneventful, with EWL 69% at 1 year with complete resolution of his DM.

Results:

Our patient underwent our routine post LSG upper GI Endoscopy (usually after the first year) at January 2015, which revealed antral ulcer 2 cm, where biopsy was taken.

Biopsy showed presence of gastric cancer (signet-ring)

Metastatic workup was negative. He underwent subtotal gastrectomy with R&Y gastrojejunostomy.

Final pathology report was T1a, N0, M0.

Conclusion:

Gastric cancer post LSG is very rare complication. Presence of ulcer in our case away from staple line would suggest coincidence.

Routine post LSG endoscopy at 1 year and every 5 years then will give good screening program for gastric cancer.

P.761**UNSTRESSING THE BETA-CELL: FASTING GLP-1 LEVELS ARE REDUCED AFTER RYGB.**

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Background: GLP-1 has several functions in glucose homeostasis, including the stimulation of insulin secretion and the reduction of hunger and food intake. After RYGB, GLP-1 postprandial release is enhanced, boosting the beta-cell function and insulin secretion. However, fasting GLP1 levels have not been completely studied before and its significance is yet undetermined.

Methods: We recruited a prospective cohort of 141 consecutive patients that underwent primary laparoscopic RYGB between January 2010 and June 2011. Patients were evaluated for clinical and laboratory parameters preoperatively. Seventy-nine (56%) agreed to collect blood samples 12 months after surgery. GLP-1 levels were measured in frozen samples, collected after an overnight fasting.

Results: Most patients (91%) were female and 61% had metabolic syndrome at presentation. T2DM was present in 17% of the patients. Mean BMI was 45.8 kg/m² at presentation and 29.8 at 12 months. Pre-operative median fasting blood glucose, insulin and GLP-1 were 96mg/dL, 18.1 µIU/mL and 4.52 pM, respectively. Twelve months after surgery, there was a significant reduction in all the measures (FBG= 82 mg/dL [p<0.001]; insulin= 7.6 µIU/mL [p<0.001]; and GLP-1= 3.45 pM [p=0.02]). Pre-operative GLP-1 was higher in patients with T2DM (6.61pM for T2DM patients, 4.35pM for patients with resistance to insulin and 3.99pM for patients with normal glucose metabolism – p=0.04). The post-operative decrease was more significant for patients with T2DM (p=0.01), such that by 12 months, GLP-1 levels were not different between groups (p=0.65)..

Conclusions: Fasting GLP-1 levels are reduced after gastric bypass. This reduction is more significant in patients with T2DM such that 12-month levels are not different between patients with and without T2DM prior to surgery. This finding suggests an important mechanism of RYGB by “unstressing” the pancreatic B-cell.

P.762**HOW USEFUL IS FERRITIN IN DETECTING IRON DEFICIENCY ANAEMIA IN THE OBESE?**

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Background: Iron deficiency anaemia (IDA) is common after most bariatric procedures. Investigating the degree of anaemia and their iron stores are imperative in successful management of bariatric patients. Ferritin, a cellular-storage protein for iron, has been used as a screening test for this purpose. Its value in assessing iron stores is limited by the fact that it is an acute-phase protein as metabolic syndrome causes high ferritin levels. In this study, we aimed to look at the relevance of Ferritin in interpreting the need for iron replacement in obese patients.

Methods: Retrospective analysis of routine blood tests on bariatric patients from September'2014 to February'2015 was performed. In all, 1083 patients had 2633 blood tests during this period - 312 Male (29%) and 771 Female (71%). The conventional full blood-count, ferritin along with transferrin and Total Iron-binding capacity (TIBC) were compared within the group.

Results: On conventional analysis, a total of 584 patients were found to have IDA, 108 men (18.49%):476 women (81.51%). Of these, ferritin levels were tested in 261 patients in whom we found low ferritin levels (18µg/L) in only 98 patients (37.55%). Furthermore, high levels of ferritin (370µg/L) were found in 13 patients among whom, 7 of them had IDA.

Conclusions: Bariatric female patients tend to develop anaemia more than men. Ferritin can be deceptively high in patients despite being anemic. And their levels are not consistently low in IDA. These results indicate poor sensitivity & specificity for ferritin as a screening-tool to detect anaemia in Bariatric patients.

P.766**WHAT DOES THE EXCISED STOMACH FROM SLEEVE GASTRECTOMY TELL US?****Melanie Lauti**¹, Sophie Gormack², Jeni Thomas², Jon Morrow², Habib Rahman², Andrew D MacCormick^{1,2}¹ *University of Auckland, Auckland, New Zealand*² *Middlemore Hospital, Counties Manukau District Health Board, Auckland, New Zealand*

Background: Staple-line leak and bleed are the most serious complications following sleeve gastrectomy, an operation that is often performed without pre-operative endoscopy. Helicobacter pylori infection causes gastritis in approximately 50% of the world population. Given that gastric inflammatory conditions are common, could they predispose patients to suffering a serious complication following sleeve gastrectomy?

Methods: Consecutive patients undergoing laparoscopic sleeve gastrectomy from March 2007 to May 2014 were included in the study. All final histologic reports were coded and investigated against whether or not the patient had a post-operative leak and/or bleed. Associations were explored using Fisher's exact test.

Results: Over this period, 976 laparoscopic sleeve gastrectomies were performed with a pre-operative gastroscopy rate of 2.2%. Over half of the specimens demonstrated a histopathologic abnormality. There were no incidental findings of malignancy. Helicobacter pylori infection occurred in 8.7% and the most common histopathologic abnormality was chronic gastritis in 39%. There was no association between Helicobacter pylori infection or inflammation and staple-line leak and/or bleed.

Conclusions: We conclude that inflammatory gastric conditions are unlikely to predispose patients to staple-line leaks or bleeds following sleeve gastrectomy and that selective pre-operative gastroscopy may be an appropriate standard of care.

P.768**POST OPERATIVE PORTOMESENERIC VEIN THROMBOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY****Raad Favez**¹, Ashraf Maghrabi¹, Ali Almontashery¹¹ *Bariatric surgery section, Department of surgery, King Abdullah Medical City, Makkah, Saudi Arabia*

Introduction: Laparoscopic sleeve gastrectomy is being performed with an increasing frequency, portal and mesenteric vein thrombosis could occur following general laparoscopic and bariatric procedures, the challenge in diagnosis coupled with the devastating effect leading to bowel infraction makes it a serious complication.

Methods: We are presenting 2 cases of an uneventful LSG performed for morbid obesity, both patients complained of abdominal pain, low grade fever, nausea, vomiting, and leukocytosis, CT scans showed the presence of Portomesenteric vein thrombosis.

Results: Both patients presented during the second week post operatively, full anticoagulation therapy was initiated once the diagnosis was confirmed, a full hematological work up was also done, they were discharged within a weeks time and were kept on full anticoagulation therapy.

Discussion: Portal and mesenteric vein thrombosis can lead to bowel infarction, lucky it occurs infrequently. However, with the increasing number of bariatric cases an increase in the incidence can be expected, it is difficult to diagnose and a high index of suspicion is needed. Furthermore, identifying high risk patient groups and keeping them on an extended low molecular weight heparin prophylaxis might be warranted to help prevent such a complication.

P.771**CONCURRENT LAPAROSCOPIC MESH REPAIR OF A MORGAGNI HERNIA, UMBILICAL HERNIA AND SLEEVE GASTRECTOMY IN A MORBIDLY OBESE INDIVIDUAL****R Revnu**¹, NR Kosai¹, MT Mustafa¹, Lakdawala MA²¹ *Minimally Invasive, Upper Gastrointestinal and Bariatric Surgery Unit, Department of Surgery, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia.*² *Centre for Obesity and Diabetes Support, Minimal Access & Bariatric Surgery Department, Saifee Hospital, Mumbai, India*

Introduction: Morgagni Hernia is a rare form of diaphragmatic hernia. Largely asymptomatic and less commonly seen in adults, it is often identified incidentally at the time of surgery. Tension-free synthetic mesh repair is the preferred treatment modality. However, the use of synthetic mesh concurrently during a clean-contaminated surgery such as sleeve gastrectomy remains controversial due to the remote possibility of mesh infection. It becomes even more challenging when multiple hernias are identified requiring placement of more than one mesh.

Objective: We aim to highlight the safety and feasibility of concurrent laparoscopic sleeve gastrectomy in the setting of a Morgagni and umbilical hernia.

Methods: A middle-aged female with BMI of 47 Kg/m² was admitted electively for laparoscopic sleeve gastrectomy with concurrent umbilical hernia repair. Intra-operatively, a left Morgagni Hernia containing omentum and a segment of transverse colon was noted. Decision was made to proceed with laparoscopic sleeve gastrectomy and simultaneous laparoscopic tension-free composite mesh repair of both Morgagni and umbilical hernia.

Result: Post-operative recovery was uneventful. Outpatient review three months later revealed excess weight loss of almost 30% with no recurrence of either hernia.

Conclusion: The advantages of concurrent hernia repair during bariatric surgery outweigh the risk of mesh infection and should be performed to prevent future risk of visceral herniation and strangulation. Laparoscopic mesh repair of a Morgagni Hernia and umbilical hernia in the setting of an electively planned sleeve gastrectomy is feasible, effective and safe in the hands of a trained laparoscopic surgeon.

P.772

EVALUATION OF SYMPTOMATIC PATIENTS FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Background: Complications after Laparoscopic sleeve gastrectomy (LSG) can be investigated either by Upper GI endoscopy or barium swallow. In certain bariatric units, both methods are used for a comprehensive investigation of patients who re-present symptomatically, but evidence to suggest a good correlation between the 2 modalities is rather limited.

Methods: We identified all patients between January 2011 and October 2014, who re-presented following sleeve gastrectomy and compared results of endoscopy and barium swallow.

Results: 36 patients were identified. Indications were dysphagia in 11, dyspepsia in 8, nausea and vomiting in 2, abdominal pain in 6, odynophagia in 1, melaena in 1, anaemia in 2 and weight gain in 5 patients. Kinking was demonstrated in 5 patients by endoscopy and this was confirmed with barium swallow in 4. Three patients had gastric dilation, which was confirmed in 2 upon barium swallow. Half of the 4 oesophageal and gastric strictures evident in the barium swallow were detected by endoscopy. Finally, endoscopy detected 6 patients with gastritis and 1 patient with a gastric ulcer. The barium swallow alone detected 3 patients with oesophageal dysmotility.

Conclusions: Endoscopy and barium swallow studies demonstrated a good correlation in detecting kinking and gastric dilation, but the combination of both studies is necessary to fully investigate post LSG symptoms.

P.774

VOMITING, EXCESS WEIGHT AND BAROS IN ROUX-EN-Y GASTRIC BYPASS SURGERY: A RANDOMIZED STUDY IN PATIENTS WITH AND WITHOUT THE SILASTIC RING

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Background: The use of the silastic ring in Roux-en-Y gastric bypass (RYGB) is still controversial. This includes the effects of it on the perception of patients on their well-being after surgery, mainly due to the frequency of vomiting.

Methods: Three hundred BAROS evaluations were obtained from the 400 volunteers who underwent RYGB without (NR) and with the ring (WR) in a prospective randomized study. This is a report on a 6, 12 and 24 months follow-up comparing the two groups and their logistic regression.

Results: The initial weight median was of 125 kg, with BMI of 47 kg/m² and average age of 36 (21-64) years in both groups. The WR group excess weight loss (EWL) was of 75.4% and in the NR Group EWL was of 71% (p=0.002). The daily/weekly vomiting occurrence at 24 months was of NR = 8.2% and WR = 26.8%. Regarding comparisons on the BAROS total score proportions, no difference was observed between the groups. However, there has been progressive improvement in the assessment of the WR group. As

for the logistic regression, the positive evaluation was influenced by gender. It was approximately 4 times higher for males. Regarding EWL, they had 2 times more chances to obtain EWL > 72%.

Conclusions: This report didn't find significant difference in the BAROS score between RYGB with and without the ring groups. It is greater weight loss that actually exerts influence on the evaluation by BAROS, not the occurrence of vomiting.

P.775
MANAGEMENT OF EARLY SMALL BOWEL OBSTRUCTION AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

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Background: Overall early complication rate after laparoscopic Roux-en-Y gastric bypass range between 0.8 to 10%. They occur on the first 30 postoperative days and include: gastrointestinal bleeding, anastomotic leak, bowel obstruction, wound infection and thromboembolic events.

Objective: The purpose of our study is to determine our early complication rate and analyze the management and etiology of early small bowel obstruction in our institution.

Methods: A retrospective review of our patient database from January 2011 to December 2013 who underwent laparoscopic Roux-en-Y gastric bypass was performed.

Results: 117 consecutive patients were included in our study (59 Female and 58 Male), mean age 38.2 years and mean preoperative body mass index 44.9 kg/m². Early complications occurred in 6 patients (4.27%), including 1 pneumonia, 2 wound infections, and 2 small bowel obstructions (1.7%) that required surgical management. The causes of bowel obstruction were intraluminal bleeding from the gastric remnant in the first patient and obstruction at the jejunojejunostomy from kinking or narrowing in the second patient. Both required laparoscopic exploration and had favorable outcomes. There was no mortality in our series.

Conclusions: A low incidence of early complications was observed in our review. Due to the immediate diagnosis and treatment of the two cases of small bowel obstruction in our institution, prevention of further catastrophic complications such as staple line disruption, anastomotic dehiscence or bowel ischemia was prevented.

P.778
GASTRIC FISTULA AFTER SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS: COMPARATIVE ANALYSIS OF NEW ENDOSCOPIC APPROACH – EARLY SURGERY

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Background: Nowadays, Roux-en-Y Gastric Bypass and Sleeve Gastrectomy are the two most performed bariatric surgeries, with proven safety and efficacy. However, complications, such as gastric fistulas, can occur, greatly increasing morbimortality. This study aims to evaluate the outcomes of gastric fistula in patients previously submitted to Roux-en-Y Gastric Bypass and Sleeve Gastrectomy.

Methods: This is a bidirectional series of cases study, with patients from General Surgery Service of *Hospital das Clínicas de Pernambuco* who presented gastric fistula after Roux-en-Y Gastric Bypass or Sleeve Gastrectomy. They must have undergone balloon dilation, stricturotomy, septoplasty or self-expandable stenting. Clinical findings, morbimortality, outcomes and healing time for the proposed procedures were analyzed.

Results: 18 patients (55,5% female) were divided in two groups, with group 1 (10 patients) undergoing Roux-en-Y gastric bypass and group 2 (8 patients), sleeve gastrectomy. In Group 1, fistula occurred on average 7.2 days after surgery (2-28d), mainly in the gastrojejunal anastomosis (60%), with sepsis in 8 cases. Average length of hospital stay was 45.3 days (18-120d), and 5 patients underwent stenting. In Group 2, fistula occurred on average 7.63 days (2-20d), mainly in the angle of His (87,5%), with sepsis in 7 patients. The average length of hospital stay was 37.3 days (3-90d), and 6 patients underwent stenting.

Conclusions: When early treated, both SG's and RYGB's fistulas present similar morbimortality outcomes; however, the first had longer healing time.

P.782
PREDICTING DIABETES REMISSION FOLLOWING LAPAROSCOPIC BARIATRIC SURGERY IN MORBID OBESITY: A MALAYSIAN EXPERIENCE

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Introduction: Obesity is an established cause of Type-2 Diabetes Mellitus (T2DM). Bariatric surgery is increasingly recognized as an effective treatment for morbid obesity due to its ability to provide a more sustainable weight loss, and risk reduction of obesity related complications.

Objective: To compare diabetic remission between LSG and LRYGB in morbid obesity. To analyse correlation between diabetic surgery scoring system (DSS) and T2DM remission.

Method: A cross-sectional observational study conducted in a single centre between January 2012 and March 2014. Morbidly obese patients with T2DM and planned for bariatric surgery were consecutive recruited. Glycemic control and weight loss was reviewed post-operatively at 6 months and 12 months.

Results: Of the 106 patients that underwent bariatric surgery, only 41 patients with diabetes were recruited. 21 underwent LSG while 20 had LRYGB. Complete remission of diabetes at 6 months was higher in the LRYGB group (35% vs. 28.6%). At 12 months, the LSG group achieved a higher rate of complete diabetic remission (57.2% vs. 40%). The remission of diabetes was more prominent in patients with diabetic surgery score (DSS) of more than 6 in both groups.

Conclusion: LSG has been increasingly recognized as a mixed procedure instead of a purely restrictive one. The high-pressured tubular stomach shortens gastric emptying time (Poiseuille Law), contributing to the hindgut theory. This in-turn stimulates release of GLP-1, a hormone responsible for insulin secretion. This could be the reason behind a higher rate of complete diabetic remission in the LSG group at 12 months.

P.784 COMPARATIVE STUDY BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC BANDED GASTRIC PPLICATION IN MALAYSIA

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Introduction: Obesity is fast becoming a global pandemic. In 2013, Malaysia has been recognised as the most obese South East Asian nation, probably even in Asia. The negative impact on our economy and health care system is serious. Bariatric surgery has been proven effective in sustained weight reduction, and decreasing obesity related morbidity. Laparoscopic sleeve gastrectomy (LSG) and laparoscopic banded gastric plication (LBGP) are examples of restrictive procedures that are used for this purpose.

Objective: The aim of this study is to compare post-operative weight reduction between morbidly obese patients undergoing LSG versus LBGP. Operative time, hospital stay and associated morbidities between the two groups were also analysed.

Method: A comparative observational study performed in two university hospitals from February 2012 to November 2013. Morbidly obese patients planned for LSG and LBGP were consecutively recruited. Perioperative data was collected and analysed using SPSS version 20. Power was set at 80% with p value of 5% (<0.05) considered significant.

Results: A total of 55 and 32 patients underwent LSG and LBGP respectively. Perioperative BMI in both was compared. Significant weight reduction was evident in the LBGP group (p=0.008). Mean operative time was longer in the LBGP group (p = <0.0005), while mean duration of hospitalization was shorter in the LSG group (p = <0.0005). One gastric perforation in the LBGP group required urgent re-laparotomy while another radiological leak in the LSG group was treated conservatively with success.

Conclusion: Although LBGP rivals LSG in weight reduction, the cost, associated morbidity, and prolonged hospital stay makes it a less favourable option in our setting.

P.787 GASTRIC FISTULA AFTER SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS: COMPARATIVE ANALYSIS OF EARLY ENDOSCOPIC-SURGICAL APPROACH

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Background: Nowadays, Roux-en-Y Gastric Bypass and Sleeve Gastrectomy are the two most performed bariatric surgeries, with proven safety and efficacy. However, complications, such as gastric fistula, can occur, greatly increasing morbimortality. This study aims to evaluate the outcomes of gastric fistula in patients previously submitted to Roux-en-Y Gastric Bypass and Sleeve Gastrectomy.

Methods: This is a bidirectional series of cases study, with patients from General Surgery Service of *Hospital das Clínicas de Pernambuco* who presented gastric fistula after Roux-en-Y Gastric Bypass or Sleeve Gastrectomy. They must have undergone balloon dilation, stricturotomy, septoplasty or self-expandable stenting. Clinical findings, morbimortality, outcomes and healing time for the proposed procedures were analyzed.

Results: 18 patients (55.5% female) were divided in two groups, with group 1 (10 patients) undergoing Roux-en-Y gastric bypass and group 2 (8 patients), sleeve gastrectomy. In Group 1, fistula occurred on average 7.2 days after surgery (2-28d), mainly in the gastrojejunal anastomosis (60%), with sepsis in 8 cases. Average length of hospital stay was 45.3 days (18-120d), and 5 patients underwent stenting. In Group 2, fistula occurred on average 7.63 days (2-20d), mainly in the angle of His (87.5%), with sepsis in 7 patients. The average length of hospital stay was 37.3 days (3-90d), and 6 patients underwent stenting.

Conclusions: When early treated, both SG's and RYGB's fistulas present similar morbimortality outcomes; however, the first apparently had longer healing time.

P.788 ASSESSMENT OF RENAL FUNCTION IN OBESE SUBJECTS; CKD-EPI EQUATION BASED ON CREATININE AND CYSTATIN C, AND MDRD EQUATION

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Background: Obesity is the phenotypic hallmark of the metabolic syndrome. There are many pathways by which the metabolic syndrome might contribute to renal disease. Accurate evaluation and measurement of renal function is an important issue in renal disease.

We carried out a retrospective study to investigate the discrepancy of eGFR calculated by CKD-EPI equation and MDRD equation based on creatinine or cystatin C in asymptomatic obese subjects on a routine clinic examination.

Methods: Overweight was defined as body mass index (BMI) ≥ 30 kg/m². Estimated glomerular filtration rate (eGFR) was calculated using the MDRD study equation based on serum creatinine level: $eGFR = 175 \times (\text{serum creatinine in mg/dl})^{-1.154} \times (\text{age})^{-0.203} (\times 0.742 \text{ if female})$. CKD-EPI eGFR based on serum creatinine in combination with cystatin C $135 \times \min(\text{Scr}/\kappa, 1)^\alpha \times \max(\text{Scr}/\kappa, 1)^{-0.601} \times \min(\text{Scys}/0.8, 1)^{-0.375} \times \max(\text{Scys}/0.8, 1)^{-0.711} \times 0.995^{\text{Age}}$ [$\times 0.969$ if female][$\times 1.08$ if black], where Scr is serum creatinine, Scys is serum cystatin C, κ is 0.7 for females and 0.9 for males, α is -0.248 for females and -0.207 for males, min indicates the minimum of Scr/ κ or 1, and max indicates the maximum of Scr/ κ or 1. The delta eGFR was calculated by the difference of CKD-EPI equation and MDRD equation.

Results: A total of 392 subjects were enrolled and 29 subjects were classified in the obese group. Age, serum triglyceride levels, and blood urea nitrogen were significantly higher in the obese group than those in the control group. However, serum creatinine and cystatin C were not different in the obese group and the control group and eGFR calculated by CKD-EPI equation, MDRD equation based on serum creatinine levels also didn't show any differences between the two groups. Interestingly, the delta eGFR by CKD-EPI equation and MDRD equation were significantly higher in the obese group. By Person correlation analysis, BMI were significantly associated with eGFR by CKD-EPI equation based on serum creatinine and cystatin C levels ($r=0.096$, $p<0.05$), not with eGFR by MDRD equation based on serum creatinine levels.

Conclusions: Our results suggest that the assessment of renal function based on eGFR both by eGFR by the CKD-EPI equation and the MDRD study equation should be needed for the precise monitoring of renal function in asymptomatic obese subjects.

P.790 BARIATRIC SURGERY IN MALAYSIA: AN UPDATE ON VOLUME OF BARIATRIC PROCEDURES PERFORMED IN THE LAST 5 YEARS (2009-2014)

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Introduction: The first open vertical gastropasty was performed in Malaysia in 1996 while the first LRYGB performed in year 2000. Once the fourth country in Asia to embark on bariatric surgery, we have not caught up with our neighbors in terms of case volume.

Objective: We aim to highlight the volume and trend of bariatric surgery in Malaysia from 2009 to 2014 and discuss the way forward for bariatric surgery in Malaysia.

Methodology: A questionnaire was distributed by e-mail to government hospitals and private medical centers with bariatric services in Malaysia. The participating hospitals were required to provide an estimate of volume, type of surgeries performed and number of surgeons who performed those procedures.

Results: 9 government hospitals and 6 private medical centers participated. Since the first bariatric procedure in Malaysia 20 years ago, only 1221 cases have been performed to date. However, in the past 5 years, 987 bariatric procedures were performed with 730 executed by 14 government sector surgeons and 257 procedures by 8 private sector surgeons. On average, each surgeon performed 44 procedures in five years, or 8 cases per year. This number is still a far cry from the average number of procedures per-Asian bariatric surgeon reported in previous studies.

Conclusion: The increase in obesity rates has prompted several game changing healthcare policies in Malaysia including a more pronounced implementation of the existing national guidelines on obesity management, and nationwide health campaigns. There has also been a more robust discussion among policy makers to recognise bariatric surgery as an effective form of treatment for obesity and T2DM.

P.792

FIXATION OF THE JEJUNUM TO AVOID INTERNAL HERNIA IN LAPAROSCOPIC GASTRIC BYPASS

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Background: In the gastric-bypass, due to the antecolic Roux-en-Y reconstruction, one angle (Petersen's space) between the mesentery of the alimentary limb and the mesocolon of the colon transversum is created, and can lead to formation of internal hernia. The traditional way to avoid the formation of these internal hernias is to close the Petersen's space during the bypass. But this closure is technically difficult, mainly in most obese patients. The formation of the internal hernia occurs when the beginning of the jejunum slides from the left side of the Petersen's space to the right side. Fixation of the jejunum (15 cm from the angle-of-Treitz) in the mesocolon of the colon-transversum in the left side of the Petersen's space can avoid the slide of the limb and avoid formation of internal hernia. The objective was to evaluate the security and efficiency of the fixation of the jejunum to avoid internal hernia.

Methods: From January/2014 to March/2014, 52 patients were submitted to laparoscopic gastric-bypass with fixation of the jejunum in the mesocolon of the colon-transversum. One year after the surgery, these patients were questioned if they had internal hernia or presented symptoms of abdominal pain in this period.

Results: With one year of follow-up, there was no one case of internal hernia in these patients. No one patient presented abdominal pain in this period

Conclusions: Fixation of the jejunum in the mesocolon of the colon transversum (in the left side of Petersen's space) is safe and very effective to avoid internal hernia.

P.796

INTRAGASTRIC BALLOON AS A CAUSE OF ACUTE PANCREATITIS, A CASE REPORT

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Background: The use of endoscopic gastric balloons is an alternative non-surgical treatment for obesity management. These devices facilitate weight loss by reducing the ability of the gastric reservoir. There have been reported complication rates ranging from 2.8 to 4.1% and the most common is intestinal obstruction.

Methods: Forty-year-old female with acute epigastric pain and abdominal distention, leukocytosis, elevated amylase and lipase, history of intragastric balloon placement 2 years previous, MRI showed migration of the balloon towards duodenum and acute pancreatitis. We performed an endoscopy at operating room. An Initial extraction via endoscopic was previously done deflating the balloon. Nonetheless, it was not possible, so we decided to push it to the small intestine and perform laparoscopic removal, the balloon was located 40 cm from the ligament of Treitz and it was sent up to 2 meters to be extracted via enterotomy, hand sewn single layer was performed and cavity wash.

Results: She presented adequate postoperative course with onset of enteral diet on the third day and discharge on the sixth day with complete tolerance and remitted pancreatitis.

Conclusions: However, although the complication rate may be low, it is important to be aware and perform adequate monitoring of patient to detect them timely. With proper diagnosis approach it can be handled in the least invasive way possible either endoscopic or laparoscopic

P.797
CORRELATION BETWEEN THE DECREASE OF VISCERAL FAT AND THE IMPROVEMENT OF THE METABOLIC SYNDROME AFTER GASTRIC SLEEVE

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Background: Metabolic syndrome, characterized by visceral fat accumulation, is a risk factor for cerebrovascular and cardiac diseases. Bariatric surgery has been proven to outperform conservative and medical therapy in achieving durable weight loss, resolution of medical co-morbidities and reduction in mortality by improvements in cardiovascular risk profile. To stress again the medical indication of surgery is to reverse (partial or complete resolution of) insulin resistance, Type 2 diabetes mellitus, dyslipidaemia, hypertension and obstructive sleep apnoea.

Methods: We studied 500 patients with metabolic syndrome (BMI >35kg/m²) after LSG by scanning them with DXA Whole Body. This analysis showed us the grams of visceral body fat. We scanned the patients before the operation, at 3 months, 6 months, one year and then yearly. At that specified moments we evaluated the following blood tests: fasting glucose, Hb A1c, lipide panel, waist and hip circumference, BMI and body weight.

Results: All of the patients diagnosed with metabolic syndrome before LSG had an improvement of their condition in the first two years of follow up, and most of them maintained the results in the follow years.

Conclusions: The LSG improves one of the most morbid conditions of the modern society.

P.801
THREE PORTS SLEEVE GASTRECTOMY. A COMPARATIVE STUDY

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Background: We think that parietal impact, by the reducing size and number of ports could have a positive effect on postoperative recovery.

Methods: We have retrospectively studied patients chosen for a first sleeve gastrectomy. During the first period of 2014 the choice of size and number of ports was case based. The second time we used a video laparoscope with a 5 mm diameter. The procedure used only 3 ports (two 5 mm and one 12 mm). When necessary a fourth port was used. The total comparison of size of ports was made by adding diameter of each port. Operating time, morbidity and length of stay were analyzed.

Results: Forty eight patients were operated on (7 men). The average age was 42,75 years (25-64). The average BMI was 42 (35-53). There were 20 patients in the first group (G1). The cumulative size of ports was a maximum of 44mm. The second group was composed of 27 patients. The cumulative size of ports was between 22 and 27 mm (It was necessary to use a fourth port 16 times). The average time for the procedure was 77mins in G1 and 71mins in G2 (p<0, 21).. There was one fistula in each group. There were no other complications or deaths. The total length of stay was 5.25 days in G1 and 4.65 days in G2 (p<0,03).

Conclusions: It is possible to do a SG with 3 ports and low parietal impact. Length of stay is reduced.

P.806
A RARE CASE OF PROXIMAL INTESTINAL OBSTRUCTION IN ADULTS AFTER LRYGB – ECTOPIC PANCREAS: A CASE REPORT

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Introduction: Heterotopic pancreas is defined as finding of pancreas tissue without anatomic and vascular continuity with the normal pancreas. Main symptoms are intermittent abdominal pain and vomiting.

Methods: We describe a 52-year-old female patient previously submitted to laparoscopic gastric bypass for primary treatment of morbid obesity. 13 years later, the patient was hospitalized with postprandial epigastric abdominal pain associated to vomiting. The abdomen was found soft and depressible.

Results: Abdominal surgery was performed finding candy-cane syndrome of the alimentary intestine, jejunal volvulus due to small tumor in the open space of Petersen and bride in the left abdomen containing second small tumor. Segmental resection of jejunum and bride's section were performed and open space of Petersen was sutured. Histopathologic examination of the mass showed pancreatic tissue consisting exclusively of the exocrine component of the pancreas.

Conclusion: Heterotopic pancreas is extremely rare condition occurring at any age, usually of no clinical importance and found incidentally. Intestinal obstruction without intussusception due to heterotopic pancreas localized in the open space of Petersen after LRYGB has not been reported. We admit that the possibility of ectopic pancreas should be included in the differential diagnosis of abdominal obstruction.

P.809 DUODENOJEJUNAL BYPASS ALONE IS NOT ENOUGH TO REVERSE DIABETES MELLITUS IN OLETF RAT MODEL

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Introduction: Duodenojejunal bypass (DJB) was proposed as surgery that improves the glucose metabolism in animal models. However, several experimental and human trials showed controversial results.

Objectives: This study was intended to verify the effect of duodenojejunal bypass in diabetic rodent models.

Methods: A known diabetic rodent model, OLETF rats were used for the performance of DJB. Seven rats underwent DJB and six rats were sham-operated for control. Oral glucose tolerance test (OGTT) was performed before and after surgery. Intestinal hormones related to glucose metabolism were analyzed.

Results: There was no improvement of OGTT after surgery in DJB group. After a more pronounced initial weight loss in DJB group, weight gain was gradual, comparable to control group. Hormonal changes were also not significant, including GLP-1.

Conclusions: We could not verify the positive effect of DJB on glucose metabolism in diabetic rats. Maybe a restrictive procedure might be added for diabetes control. Human trials with DJB must be used judiciously.

P.810 EVALUATION OF THE NEWS SCORE IN THE POSTOPERATIVE MANAGEMENT OF BARIATRIC PATIENTS

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Introduction: The Royal College of Physicians recommended the implementation of a National Early Warning Score (NEWS) across the NHS.

Objective: The aim of this study was to evaluate the NEWS score in the postoperative management of bariatric patients and to identify other physiological variables that might improve the detection of early postoperative complications.

Methods: The NEWS score was completed by the nursing staff within the enhanced recovery protocol. The admission NEWS scores and baseline blood pressures were recorded as well as the highest and lowest NEWS scores on discharge from recovery and throughout the postoperative stay. Any drop in the systolic blood pressure >30mmHg below the baseline was charted. Comorbidities, BMI, type of procedure, postoperative oxygen, length of stay and complications were correlated.

Results: A total of 100 consecutive bariatric patients were included. The highest NEWS score recorded during recovery was 11. Thirty three patients experienced a significant drop in blood pressure not detected by the NEWS Score. Two patients experienced bleeding and re-operation occurred in one patient. In one patient with bleeding the NEWS did not detect deterioration. All patients were given oxygen in the postoperative area; however, the NEWS does not differentiate between 2L and 60% oxygen.

Conclusion: In this study group there was some standardisation of the physiological results. The preliminary results show that the NEWS score could be improved to include a drop in blood pressure below the baseline to enable early recognition of deterioration and appropriate clinical management. Oxygen supplementation masks the true value of the NEWS.

P.811
DOES COMMON LIMB LENGTH INFLUENCE EXCESS WEIGHT LOSS AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS?

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Background: Although the gastric bypass procedure has proven its reliability over time in terms of weight loss, there continues to be a notorious controversy in terms of length of limbs used. Although the length of the alimentary limb is of limited relevance in terms of weight loss, common limb length (CLL) could be related to the level of malabsorption and influence weight loss.

Materials and methods: We performed a laparoscopic Roux-en-Y gastric bypass (LRYGBP) in 90 patients with a mean pre-operative BMI of 44,8. Alimentary and bilio-pancreatic limbs length was respectively fixed at 150 and 75 cm. A systematic intra-operative measurement of the common limb was performed.

Results: As expected, we found a great variation of the the jejuno-ileal length (JIL) from 380 cm to 815 cm and so of the common limb length (CLL) from 155cm to 590 cm. The average common limb length was $358,2 \pm 94,5$ cm. There was no statistically significant correlation between common limb length and excess weight loss (EWL) after one year of follow-up in this population ($p=0.52$). We also found a linear correlation between the jejuno-ileal length and the height of individuals.

Conclusion: In classical LRYGBP with a fixed 150 cm alimentary limb and a 75 cm bilio-pancreatic limb, there is no evidence that anatomical variations of the common limb length could influence weight loss.

P.812
OMEGA-LOOP GASTRIC BYPASS: RESULTS OF A SINGLE CENTRE

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Introduction: Since the introduction by Robert Rutledge in 2001, the omega-loop gastric bypass gains more popularity worldwide. Although controversial it's an effective treatment for morbid obesity and metabolic disorders such as diabetes type 2.

Methods: We reviewed retrospectively 302 patients between 2011 and 2013 with a mean follow-up of 2 year. Among them were 60 male patients and 242 female. We looked for BMI after one year post operatively, early and late complications, resolving of metabolic disorders and quality of life.

Results: Among the 302 patient's there were 259 primary bypasses, 42 redo-procedures after band and 1 after Mason. Mean BMI in female patients was 42(35-51) and in male patients 41(35-59) pre-operatively. Post-operative after one year mean BMI was 25 in both groups. As early complications : 6 intra luminal anastomotic bleeding conservative treated, one bleeding of the staple line of the gastric remnant which required revision, 3 lung embolism, 2 leakages with revision and transforming in Roux-en-Y gastric bypass. Late complications: 2 perforated marginal ulcers, one splenectomy after spontaneous rupture post infarction, 1 severe hypoglycaemia which requires transforming it in normal anatomy. There is no mortality and we did not see any internal herniation. Diabetes is resolved in 80%, there is a high satisfaction of quality of life.

Conclusion: The omega-loop gastric bypass is a safe, reproducible and effective technique. The results are comparable with the Roux-en-Y bypass.

P.819
SLEEVE GASTRECTOMY AND CONTROVERSY OF DRAIN INSERTION

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The incidence of obesity is increasing worldwide .and bariatric surgical procedures have been known to be associated with long term resolution of obesity as well as improvement or resolution of its associated comorbidities.

Laparoscopic sleeve gastrectomy is the bariatric procedure with the fastest growing number worldwide, and today is the second most often conducted bariatric procedure after Roux-en-Y gastric bypass.

And like any other surgical procedure LSG is associated with post-operative complication, and with the aim of early detection of post-operative complication such as leak or bleeding and to increase post operative patient safety , routine abdominal drain insertion has been practice.

Reviewing our own number of sleeve gastrectomy since 2010 (more than 700 cases) and the routinely abdominal drain insertion which did not lead to early detection of our 8 cases of leak and post operative hematoma collection , we started from January 2014 to conduct

study in 100 cases of LSG (50 cases with drain & 50 cases without drain) locking and studying the roll of drain in detecting early post-operative complication and effect of drain on post operative inflammatory response , operation time, and hospital stay .

The main question to be raised is, what are the factors which could affect the drain function from been good postoperative good leak detector ? Is it the type of drain, or the location, or the length of stay?

We think that the use of drain after bariatric surgery will remain controversy, and there is a further demand for well-designed randomized controlled trial to clarify the value of prophylactic drain after bariatric surgery .

P.823
REPAIR OF LARGE ABDOMINAL WALL DEFECTS COMBINED WITH PANNICLECTOMY AND ABDOMINOPLASTY (P+A).

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Introduction: Repair of complex abdominal wall defects is a challenging task, especially in obese and postbariatric patients.

Objectives: To avoid postoperative seroma formation, the feasibility of combining hernia repair routinely with p+a was tested.

Methods: Between September 2013 and January 2015, consecutively n=7 postbariatric patients and n=10 morbidly obese patients with large abdominal defects were scheduled for hernia repair and simultaneous p+a. Nine patients (53%) suffered from loss of domain. In 5 patients (29%) small intestine or colon had to be resected simultaneously.

Results: Seven patients experienced weight loss due to bariatric surgery (mean 53 kg; range 40-65 kg); in 5 patients weight reduction before hernia repair was induced by operation (mean 34 kg, range 14-60) or by diet (mean 11 kg, range 3-30); one patient was an emergency case with an ileus. Repair technique was inlay/onlay mesh (n=5), Ramirez component separation (n=4) and sublay mesh (n=8). P+a was performed simultaneously in all 17 patients. Excised tissue weighed 5.9 kg (mean, range 1.5-15). Postoperative complications: in 4 patients a localized wound necrosis occurred, 3 of them had a biliopancreatic diversion (overall there were 4 patients with biliopancreatic diversion); one patient developed a seroma; one patient (76 years, BMI 60 kg/m²) died after emergency ileus operation from necrotizing fasciitis.

Conclusions: To avoid seroma formation it appears prudent to combine hernia repair with p+a in obese or postbariatric patients. Biliopancreatic diversion patients have an increased risk of localized necrosis (p<0.05).

P.828
TWO INCIDENTAL CASES OF GASTRIC POLYPS AFTER BARIATRIC SURGERY

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Background: Morbid Obese patients experience higher rates of gastro-intestinal symptoms and incidence of malignancies tend to increase with obesity. Although routine preoperative endoscopic evaluation is recommended by The American Society for Gastrointestinal Endoscopy there no definitive guidelines for routine endoscopic follow-up of bariatric surgery patients. Here in we present a case of gastric polyposis after laparoscopic adjustable gastric banding (LAGB) and a case of gastrointestinal tumor after Sleeve gastrectomy.

Methods: 40 years old male patient who one year ago underwent laparoscopic sleeve gastrectomy has been evaluated by gastroscopy in 12th months of follow-up. 34 years old female patient who underwent laparoscopic gastric banding 7 years ago has been evaluated by gastroscopy due to nausea and dyspepsia.

Results: Gastroscopy revealed a round 2 cm polypoid lesion at the lesser curvature of the stomach in the first male patient. The lesion was endoscopically resected by the help of a diathermic snare. The pathology showed a tubulovillous adenoma and no malignancy were detected at the stalk. The other female patient had more than 10 polyps at the corpus and antrum below the gastric band and multiple biopsies were obtained from the polyps and the pathology revealed intestinal type adenomatous polyp without high grade dysplasia. H. Pylori was ++ in both cases. Both cases were scheduled for control gastroscopy 6 months later.

Conclusion: All the bariatric patients should be screened for gastric malignancies and H.pylori should be tested with a preoperative endoscopy and further endoscopic follow-up is necessary if any gastrointestinal symptoms are present after surgery.

P.842
OESOPHAGEAL PERFORATION: AN UNDERESTIMATED RISK FROM BOUGIE PLACEMENT

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Background: Bougie insertion is a common practice done during bariatric surgery. Although it can cause oesophageal perforation, this risk is not common. Our case report focuses on oesophageal perforation from bougie placement and subsequent management carried out.

Introduction: We present a 49 years old morbidly obese woman who underwent laparoscopic sleeve gastrectomy with use of bougie that was passed into the esophagus. Patient had persistent upper abdominal pain, fever and respiratory failure on day two post operation. Contrast study done post operation showed perforation at distal oesophagus with contained leak. Prompt oesophageal stenting and antibiotics improved patient condition markedly.

Conclusions: Passage of a bougie is a blind procedure and it carries risk of oesophageal perforation. This risk should be recognized and identified early as prompt intervention lowers associated morbidity.

P.852
THE FEASIBILITY OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AS A CONVERSIONAL PROCEDURE FOR FAILED LAPAROSCOPIC SLEEVE GASTRECTOMY.

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Background: Laparoscopic Sleeve Gastrectomy (LSG) is increasing worldwide due to its success; however, long term follow up results included insufficient weight loss and weight regain. LSG to Laparoscopic Roux-en-Y-Gastric Bypass (LRYGB) is currently being studied as one of the conversional techniques utilized. This study aims at evaluating the aforementioned conversional technique.

Methods: 1300 patients underwent LSG from 2009 to 2012 in AlAmiri Hospital, Kuwait, of which 12 patients underwent LRYGB. Data included length of stay, percentage of excessive weight loss (EWL%), and Body Mass Index (BMI).

Results: 12 patients underwent conversion from LSG to LRYGB due to insufficient weight loss (73%) and weight regain (27%) after a mean interval of 4 years. A total of 85% were females. The mean weight and BMI prior to LSG was 136.5kg and 52. The EWL% after the initial LSG was 37.9%. There were no complications recorded after the primary LSG. Mean length of stay in hospital was 3 days. Results of conversion of LSG to LRYGB involved a mean EWL% 61.3% after 1 year (p-value 0.009). A comparison of the EWL% of LRYGB and LRSGB for failed primary LSG was not significant (p-value 0.097).

Conclusions: LRYGB demonstrated a significant reduction in weight. Larger and longer follow up studies are required to validate the results.

P.856
SIMPLIFIED LAPAROSCOPIC GASTRIC BYPASS CAN PREVENT THE APPEARANCE OF INTERNAL HERNIAS?

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Introduction: Internal hernias in postoperative of laparoscopic gastric bypass can cause catastrophic complications. We present our experience with a cohort of patients with laparoscopic gastric bypass technique simplified.

Objectives: Evaluated in a cohort of patients the prevalence of internal hernias using the simplified technique of laparoscopic gastric bypass.

Methods: From a database of 1200 patients who underwent simplified laparoscopic gastric bypass since the year 2007, we could interview 150 patients with five years being operated. We asked about symptoms of recurrent abdominal pain, distension and emesis. It was also questioned by surgical procedures performed during the 5 years after bariatric surgery.

Results: Of the 150 patients interviewed were no recurrent symptoms that might indicate intestinal obstruction. No patient was operated by the group or in other institutions due to internal hernia.

Conclusions: According to our observation the simplified laparoscopic gastric bypass has a low prevalence of internal hernias.

P.857
COMPARISON OF THE SURVEY OF THE ACOCIB IN THE YEARS 2013 AND 2015 IN KIND OF SURGERY TRENDS AND INDICATIONS.

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Introduction: In recent years the bariatric surgery in the world change in favor of restrictive procedures such as laparoscopic gastric sleeve and have modified the indications favoring less extreme obesity. Our country is not immune to this trend.

Objectives: evaluate the change in the trend of Colombian surgeons regarding surgical technique and modification of the indications.

Methods: Surveys conducted by the Colombian Association of Obesity and Bariatric Surgery ACOCIB in 2013 and 2015 on the trend in preference of surgical techniques and indications for surgery were taken. In 2013 21 surgeons members of the association were evaluated, in 2015 60 surgeons responded the survey.

Results: In 2013 the laparoscopic gastric bypass ratio vs laparoscopic sleeve gastrectomy was 69% / 28%, in 2015 the ratio was changed to 30% for gastric bypass and 70% for gastric sleeve. For the specific group of patients with comorbidities from BMI of 35 kg / m² the relationship changed in 2013 where surgeons gastric bypass respondents preferred by 90% by 2015 where in this group of patients surgeons perform 50% of laparoscopic gastric bypass and 50% laparoscopic gastric sleeve.

Conclusions: The global trend growth a laparoscopic gastric sleeve as primary surgery is also palpable in Colombia. The gastric sleeve is increasingly used in patients with comorbidities.

P.858 EFFICACY OF 'ABCD' SCORE IN PREDICTING LONG TERM (5-y) REMISSION OF TYPE 2 DIABETES FOLLOWING METABOLIC SURGERY

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Background: Bariatric/metabolic surgery has been proposed for the treatment of inadequately controlled type 2 diabetes mellitus (T2DM) in obese patients. However, prediction of successful long-term remission of T2DM after metabolic surgery has not been clearly studied. We aim in this study, to evaluate efficacy of ABCD score, which we had reported earlier, to predict the long-term effects of metabolic surgery on type 2 diabetes.

Methods: Outcomes of 162 patients who underwent metabolic surgery, and who had complete 5-year follow-up data between 2006 and 2010, were assessed. Prolonged complete remission was defined as glycated hemoglobin (HbA1C) less than 6% without diabetic medication up to 5-y. ABCD score, a multi-dimensional grading system composed of the age, BMI, C-peptide levels and duration of T2DM was calculated to study its efficacy to predict prolonged remission.

Results: At 5 years, there was a complete remission rate of 61.8%. From those who had a complete remission at the end of 1 year, 8.9% failed to sustain it to the end of the study period. Patients with ABCD scores above 7 had 75-85% and those 3 and below had 0-12.5% complete remission respectively, at 5 years. ABCD score was the only independent predictor of success after multivariate logistical regression analyses ($p < 0.001$).

Conclusions: The ABCD score is a simple multidimensional grading system that can predict the success of prolonged T2DM remission after metabolic surgery.

P.862 GENE POLYMORPHISMS ON NON-ALCOHOLIC STEATOHEPATITIS (NASH) IN SEVERELY OBESE ASIAN PATIENTS: SYNERGISTIC INTERACTIONS OF A PNPLA3 VARIANT AND A PPARGC1A VARIANT

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Background: The patatin-like phospholipase domain-containing protein 3 (PNPLA3) variant has been reported to be associated with nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH). However, studies about the associations among other three gene polymorphisms—the peroxisome proliferator-activated receptor gamma coactivator-1-alpha gene (PPARGC1A), the glucokinase regulatory protein (GCKR), and apolipoprotein C3 (APOC3)—and NASH are scarce. Accordingly, we studied the effects of these genetic polymorphisms on NASH in severely obese Asians.

Methods: The genotypes of PNPLA3 rs738409, PPARGC1A rs8192678, GCKR rs780094, and APOC3 rs2854117 were determined in 177 severely obese patients who received bariatric surgery. The diagnosis of NASH and the NAFLD activity score (NAS) were determined by liver biopsy and histopathology.

Results: Of 177 patients, 86 (48.6%) and 91 (51.4%) were in the non-NASH and NASH groups, respectively. We found that the PNPLA3 and PPARGC1A variants but not the GCKR and APOC3 variants were associated with NASH. After adjustment for potential confounders for NASH, we determined that both the PPARGC1A rs8192678 GA/AA genotype (OR 2.14; 95% CI 1.02–4.51) and the PNPLA3 rs738409 GG genotype (OR 4.42; 95% CI 1.43–13.66) were independent risk factors for NASH. Further, the joint effects of the PPARGC1A rs8192678 GA/AA genotype and the PNPLA3 rs738498 GG genotype were highly associated with NASH (OR, 8.66; 95% CI 1.98–37.97; $P = 0.004$).

Conclusions: For severely obese Asians, PPARGC1A rs8192678 GA/AA genotype and the PNPLA3 rs738409 GG genotype owned synergistic effects on increasing susceptibility to NASH.

P.863 UNUSUAL POST OPERATIVE SEQUELAE AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Sumeet Shah

Rockland Hospitals

Laparoscopic Sleeve Gastrectomy is one of the commonest bariatric operations performed worldwide. While most of the patients have an uneventful recovery, some have a difficult post operative course. Leak from gastric staple line is one of the well recognized and discussed post op complication. However, we present a couple of cases who had a eventful post op recovery due to unusual complication after a uneventful lap sleeve gastrectomy.

We will also share details on the patient management and discuss with senior bariatric surgeons about their experience in dealing with such unusual post op complication after sleeve gastrectomy.

Patient 1 had an Acute pancreatitis post operative which led to acute abdomen and mimicked a leak. Patient 2 had an acute hepatic failure post operative leading to multi organ dysfunction.

P.864

BOUGIE SIZE IN SLEEVE GASTRECTOMY – FROM ‘CONTROVERSY’ TO ‘CONSENSUS’

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Laparoscopic Sleeve Gastrectomy is currently one of the most frequently performed bariatric operations across the world. It started initially as a step 1 operation for the Duodenal Switch procedure. At that time the bougie size used to make a sleeve was 60 French. Over a period of time it has got establish as an independent procedure and the bogie size has been decreasing.

Claims have been made about greater percentage of weight loss with a narrower sleeve. However, the counter effect is the leak rates, one of the most dreaded complication after sleeve, have also increased with progressively narrower sleeve. Some surgeons still make a 28 Fr Sleeve along the upper G.I endoscope. Others are using 32 Fr bougie. Many surgeons prefer making a Sleeve along a 38 Fr gastric caliberation tube. Evidence says that leak rates are least with a 40 Fr or greater sleeve without significant risk in long term weight gain. The picture of exact sleeve size gets further complicated due to suturing/ non suturing of the sleeve.

The last word on bougie size in sleeve gastrectomy has not been written yet. It is difficult to compare results across different standards due to this non standardization. The key balance to achieve is to avoid leaks and gastro esophageal reflux versus preventing long term weight gain. This paper will discuss the pros and cons of narrow versus wide sleeve and if we have consensus on the ideal bougie size.

P.865

A CASE OF ENDOSCOPIC MANAGEMENT OF POST SLEEVE GASTRECTOMY LEAK AND ABSCESS

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Background: We report a case of post Sleeve gastrectomy leak with an abscess formation that was tackled by endoscopic management.

Case Summary: A 39 Male, BMI 60 (weight 179 kg, height 173 cm having DM, HTN, OSA) was operated with a laparoscopic sleeve gastrectomy on 3/3/14. He was discharged on the 5 th day. However he returned with low grade fever, diarrhea, halitosis and some epigastric discomfort after two weeks. However he was tolerating oral feeds. He was readmitted for evaluation. Clinical and laboratory investigations showed signs of sepsis that was promptly treated by IV antibiotics. CT scan showed a large abscess at the left subphrenic area at the GE junction

We performed an endoscopy that showed a small leak hole at the GE junction that communicated with the abscess cavity. The abscess was drained intragastrically by performing an endoscopic septotomy. A nasojejunal tube was also inserted for feeding purpose. No stent was deployed.

Repeat endoscopies were done at intervals of one week on OPD basis to evaluate the healing of the abscess cavity. Serial endoscopies showed progressive collapse of the abscess cavity. The CT scans also confirmed the same. The NJ tube was removed at the end of 4 weeks when CT showed no leak. The patient recovered completely after a month of the primary endoscopic drainage.

Conclusion: This case is an example how certain post sleeve leak-abscess complication can be managed by endoscopy alone and without a stent.

P.866

HIGH FAT DIET INDUCED OBESITY IN A RAT MODEL ALTERS THE MOLECULAR FINGERPRINT OF THE URINARY BLADDER AND DECREASES DETRUSOR SMOOTH MUSCLE REACTIVITY

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Background: The pathomechanism of obesity associated bladder dysfunction remains unclear, however, growing evidence suggests that broad metabolic changes in obesity phenotype may be at least partly responsible. In the present study, we investigated the effect of high fat diet (HFD) on detrusor smooth muscle (DSM) reactivity and molecular signaling in an obese rat model.

Methods: Thirty male Sprague-Dawley rats (aged 4 weeks) were evenly randomized to receive either chow diet (CD) or HFD (11 weeks duration). Urinary bladder proteome alterations were investigated by a global shotgun proteome approach and validated by ELISA. At the age of 15 weeks, urinary bladders were obtained and DSM reactivity was evaluated in organ chambers by stimulation of either purinoceptor- and cholinoceptor-mediated contractions (ATP, carbachol) or adrenoceptor-mediated relaxation (isoproterenol).

Results: In HFD rats, we found significant alterations in lipid metabolism, fat mass and inflammatory markers. Voided volumes were significantly decreased, and the bladders showed marked fibrosis. The proteome analysis of urinary bladder identified 383 proteins and canonical pathway analysis revealed a significant up-regulation of acute phase reaction, hypoxia and proteins related to mitochondrial dysfunction. The DSM of HFD rats revealed markedly decreased purinoceptor- (2.1 fold) and cholinoceptor- (2.6 fold) mediated contractions and significantly decreased adrenoceptor-mediated relaxation (1.9 fold).

Conclusions: HFD is sufficient to induce significant remodeling of the urinary bladder and alterations of the molecular fingerprint. Our findings give new insights into obesity related bladder dysfunction and prompt diagnosis can be used to enable targeted early intervention, i.e. before manifestation of potentially irreversible structural alterations.

P.867 METAPROTEOME ANALYSIS OF RAT MICROBIOTA REVEALS MUCUS-SPECIFIC DISTRIBUTION AND ENZYMATIC FUNCTIONALITIES IN A HIGH FAT DIET INDUCED OBESITY RAT MODEL

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Background: The microbial community in the human intestine appears to be involved in the pathogenesis of obesity. Our group published that mucus-attached microbiota differs significantly from the substrate-attached and planktonic microbiota in gut segments. Thus, any study of the microbiota community using only fecal samples may not reveal a sufficient understanding of the underlying pathophysiology. We investigated the spatial resolution of the microbiota consortia and their functionalities in the different gut sections in a high fat diet (HFD) induced rat obesity model.

Methods: At the age of 4 weeks, 24 male Sprague-Dawley rats were evenly randomized into two groups receiving either chow diet (CD) or HFD. Following 11 weeks of feeding, all rats were phenotyped and samples along the intestinal tract (proximal, medial and distal colon) and fecal samples were analysed by label-free quantitative metaproteomics.

Results: In total, the metaproteome analysis yielded 8004 non-redundant bacterial peptides, of which 4281 were identified in several parts of mucus. The majority of bacterial peptides were assigned to the phyla: Firmicutes, Bacteroidetes and Proteobacteria. The major functionalities observed were those involved in translation, energy conversion as well as carbohydrate and amino acid metabolism. Remarkably, peptides representing ATPase were decreased; whereas tricarboxylic acid cycle was increased in HFD rats.

Conclusions: The microbial diversity and the functionalities of the mucus sections of the large intestine were significantly altered by HFD. Additionally, our results indicate that a fecal sample does not reflect the bacterial diversity and functionality of large intestine mucus layer either in CD or HFD.

P.870 THE POTENTIAL INFLUENCE OF DIET ON THE ASSESSMENT OF THE EFFECTS OF METABOLIC SURGERY ON THE BRAIN IN A RODENT MODEL

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Background: Neuroimaging studies have demonstrated that bariatric surgeries affect the brain. Animal models, especially using rodents, have become popular in recent years in assessment of metabolic effects of bariatric procedures. Such studies in the future will likely involve neuroimaging. Here, we would like to emphasize the potential influence of the diet on the measured effects of the metabolic surgery on the brain and its function in a rodent model.

Methods: Twenty five male Wistar rats were put on high-fat diet (HFD), while 25 control male rats (CON) remained on chow. Both groups underwent memory tests in 8-arm radial labyrinth at 3rd, 6th, and 9th month. At one year, all animals underwent MRI to evaluate hippocampal volumes and proton magnetic resonance spectroscopy at 7T.

Results: HFD rats consumed slightly more calories than CON, but less proteins. However, their protein intake was within recommended amounts. HFD rats had better scores of memory than CON throughout the experiment. At one year, their hippocampi were by 3% larger than in CON ($p=0.05$), whereas concentration of N-acetylo-aspartate (NAA, marker of neuronal viability) was 8% higher.

Conclusions: Type of diet used in a rodent model affects the brain and animal behavior. Interestingly, high fat diet in this study led to better memory. Our study highlights the importance of diet used in experimental models of bariatric surgery as a potential factor that could bias the obtained results.

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P.871

EARLY EXPERIENCE WITH BANDED RYGB IN NORTH INDIA

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Introduction: The author has been doing Rygb since 2008 in tertiary care centers in New Delhi. Although majority of patients do well in terms of excess weight loss, a sizeable number don't experience either adequate weight loss, or start regaining weight after 3-5 years, therefore, banded- RYGB program was initiated in november2013, after it was cleared by the hospital ethical committee.

Objectives: To assess feasibility of Banded RYGB in Indian population and compare the result with non-Banded RYGB.

Methods: 44 banded Rygb have been performed in subjects with BMI over 40. The Banded RYGB was performed by technique according to Mal Fobi. A 7.0cm GaBp auto lock ring (Bariatric Corporation) was placed around the newly formed gastric pouch, 2.5cm below GE junction and 1.5 cm above gastrojejunostomy; which was constructed over a 38 F boogie in a hand sewn retro-colic ante gastric manner similar to a non-banded RYBG.

Results: Variables such as, operating time, blood loss, post operative fluid intake, antiemetic/analgesic requirement, pain score, nausea, vomiting & length of stay were compared in two groups. The initial results are similar to standard Rygbp in terms of operating time, blood loss, hospital stay, post operative liquid intake and analgesic requirements etc.

Conclusion: Banded RYGB is a feasible procedure in Indian Context and requires a long term follow -up to evaluate and compare the long term outcomes in terms of weight regain and resurgence of co-morbidities in both the groups.

P.872

PREVALENCE OF DAY TIME SOMNOLENCE AMONGST NORTH INDIAN BARIATRIC PATIENTS AND ITS CORRELATION WITH NECK CIRCUMFERENCE

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Introduction: Morbid Obesity is becoming a major health concern in India. It leads to a number of sleep-disordered breathing patterns like obstructive sleep apnoea and obesity hypoventilation syndrome (OHS), leading to increased morbidity and mortality with degraded quality of life. OHS patients may have obstructive sleep apnoea. Despite having major ill effects on health, OHS is under-recognized and under-diagnosed. All individuals should be screened for identification of underlying OHS before undergoing Bariatric Interventions to assess the existence and prevalence and further its resolution with resulting weight loss.

Objectives: Broad: To assess the prevalence of underlying OHS in obese Indian population.

Specific: 1. To compare the prevalence of Obesity Hypoventilation Syndrome in adult male and female Indian population 2. To assess day time sleepiness by using EPWORTH SLEEPINESS SCALE.

Methods- All patients opting for bariatric surgery between Jan 2012 to Jan2015 was screened for underlying OHS. All the patients with the habit of snoring, with at least one other symptom or parameter which were suggestive of OHS like choking during sleep time, witnessed apnoeas (observed by partner/spouse), Excessive daytime sleepiness assessed by the EPWORTH sleepiness scale, early morning headache, use of number of pillows, sleep position and their BMI and neck circumference were assessed.

Results: 852 patients were assessed. Out of total number of patients 44.2% (377/852) were male and 55.8 % (475/852) were female with the mean age 43years and 42 years for female and male patients respectively. Neck circumference was found >35 cm in 99.6% males (237/238) and >32cm in 91.5% (292/319) in females. 7.6% (36/475) female patients and 9.8% (37/377) male patients had EPWORTH score between 16-24. Out of all 98.5% patients had BMI >30, 99.3% females and 97.3% males had BMI >30. Out of total patients 8.6% were in the range of 16-24 , 9.8% male and 7.6 % of female patients were in the range of 16 to 24 respectively.

Conclusion: more than 90% patients with BMI more than 30 have clinically significant high NC, however it has a poor correlation with day time sleepiness

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LAPAROSCOPIC SLEEVE GASTRECTOMY: STAPLE-LINE REINFORCEMENT AND PREVENTION OF HEMMORHAGE

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Introduction: LSG is a promising procedure in definitive surgical treatment of obesity, especially as a primary and only operation. Many studies have been made in order to minimize the risk of staple line leak and its reinforcement with sutures or buttresses is one of them. The second most common complication being bleeding from the staple line was also studied regarding the usage of hemostatic glue or not.

Materials-methods: 387 patients underwent LSG from January 2008 till January 2015. They were divided in two groups: group A (129 patients) underwent symptomatic staple-line reinforcement with either sutures or buttresses because of intraoperative bleeding, misfiring or overlapping of the linear stapler and group B (258 patients) where no staple-line reinforcement was applied. The same patients pool was subsequently divided into two more groups (C=140 and D=247) regarding the appliance of a hemostatic glue or not along the staple line, respectively.

Results: The leak rate was 4,65% in group A and 3,9% in group B. The mortality rate was 0,78% and 0,77% respectively. Regarding our second variable, the bleeding rate was 0,71% in group C and 1,21% in group D.

Conclusions: In our study, LSG proved to be a safe procedure with low complications rate and no statistical difference between the staple-line reinforcement and the non-staple-line reinforcement group, regarding the leak rate and the mortality rate. On the other hand, the application of hemostatic glue showed a promising perspective in lowering the bleeding rate.

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LAPAROSCOPIC SLEEVE GASTRECTOMY AND BENEFITS OF THIS PROCEDURE

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Introduction: Obesity is a worldwide medical condition, responsible for many health problems such as arterial hypertension (AH), diabetes mellitus type 2 (DM), non-alcoholic fatty liver disease (NAFLD), sleep apnea and orthopedic conditions. Bariatrics aims to change lifestyle, reduce body weight but more importantly contribute in improving those health parameters leading to permanent medical conditions.

Materials-methods: 183 patients (76 male, 107 female) underwent a LSG from January 2011 until January 2015 at our private practice. Mean age was 37,6. 45(24,6%) suffered from AH prior surgery, 14(7,7%) from DM, 100(54,6%) from NAFLD, 72(39,3%) had orthopedic problems and 76(41,5%) complained of sleep apnea and no proper bed rest.

Results: All patients underwent a standard laparoscopic procedure (mean operative time was 68min), remained hospitalized for 4 days and followed a specific diet upon discharge for 1 month, slowly progressing from liquids to solid meals. They revisited our private practice for follow up, every 10 days for the first month and every six months from then on. 42(93,3%) reported and showed evident improvement in AH, 12(85,7%) in DM, 93(93%) in NAFLD, 76(100%) in sleep apnea and 64(88,9%) in musculoskeletal problems.

Discussion: LSG not only helps obese patients to lose weight permanently but also contributes in lessening and at some cases even curing other medical conditions prone to lead to heart failure and ischemia or other life threatening diseases. Patients not only improve in appearance and mood, but also demonstrate a better quality of life.

P.876

VITAMIN D AND CALCIUM STATUS OF OBESE NORTH INDIAN BARIATRIC SURGERY PATIENTS

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Introduction-The prevalence of vitamin D and Calcium deficiency and patient's response to treatment is yet to be ascertained in north Indian obese people undergoing bariatric surgery.

Objective-to assess pre and post-operative (3,6 and 12 months) vitamin D and Calcium levels of patients undergone either sleeve gastrectomy or gastric bypass bariatric surgery.

Methods A retrospective analysis was performed on patients who underwent bariatric surgery from Jan 2012 to Jan2014. Serum Vitamin D and Calcium levels were analyzed.

Results: Mean patient age was 42 years; 57.7 % (237/411) patients were females and 42.3% (174/411) were males. Of total 411 patients, 75.5% (275/411) were Vitamin D deficient (<30mg/dl) and 56.1% (216/411) were Calcium deficient pre surgery. These patients had a higher preoperative BMI (Body Mass Index) than those with normal Vitamin D and Calcium levels on initial assessment. A correlation was found between preoperative BMI and Vitamin D and Calcium levels. Three months, Six months and one year following bariatric procedure 36.7%(116/316), 33.9%(79/233) and 34.2% (51/149) respectively were deficient in vitamin D and 37.4% (117/313), 25.8%(57/221) and 34%(50/147) respectively were deficient in calcium . The postoperative incidence of observed deficiencies in Sleeve gastrectomy, RYGB and MGB was similar.

Conclusion Severe vit D deficiency is widely prevalent in morbid obese north Indian population undergoing bariatric surgery. In spite of follow up supplements and periodic monitoring more than 1/3rd of them are still deficient regardless of the type of bariatric procedure performed.

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LAPAROSCOPIC GASTRIC DIVERTICULUM RESECTION DURING SLEEVE GASTRECTOMY

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Introduction: We report 69 female patients with a history of morbid obesity with BMI 44 and Gastric diverticulum diagnosed by endoscopy. Why Sleeve Gastrectomy decided.

Description of the Contents: Patient in French position under general anesthesia with antithrombotic agents. Securing the patient. You enter cavity, abdominal semiotics watching stomach with giant gastric diverticulum. Section Harmonic Scalpel left gastrophrenic ligament with identification of the left crura. Section flaccid pars and dissection of the right crura. Sleeve gastrectomy is performed 5 stapler cartridge type Echelon 60 mm. Surget invaginant 3.0 PDS suture. Control of hemostasis. Drawing in bed. Removing stomach by trocar paraumbilical. Close access.

Observations and /or Comments: Patient evolved favourably. Discharge at 48 hours from hospital. It was decided to present this case because it is not a common finding in Gastric diverticulum patient with morbid obesity undergoing Gastric Sleeve.

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EFFICACY OF SLEEVE GASTRECTOMY AS AN ANTI-DIABETIC PROCEDURE IN OBESE INDIAN PATIENTS

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Introduction: Sleeve Gastrectomy (SG) is traditionally believed to be a restrictive procedure, although many studies have shown its metabolic effects with varying efficacy. We analyzed our 5 year results of Laparoscopic / Robotic SG in Diabetic Obese individuals.

Objectives: Analysis of short to medium term efficacy of SG in resolution of Type 2 Diabetes Mellitus (T2DM) in Indian obese diabetic patients.

Methods: A retrospective review of all the type 2 diabetics (T2DM) with BMI >32.5 kg/m² who underwent SG since January 2010 was done. A total of 215 patients were included in the study. The parameters assessed were Age, Sex, BMI, Duration of T2DM, fasting blood glucose, HbA1c, fasting insulin and c-peptide levels.

Results: At one year, the mean weight reduced from 126.1 to 74.5 kilograms while mean BMI reduced from 47.2 to 29.9 kg/m². The fasting blood glucose reduced from 123.5 to 83.8 mg% and the HbA1c dropped from 7.58 to 6.02 %. Fasting insulin levels dropped from 34.1 to 8.98 uIU/ml and fasting C-Peptide levels came down from 5.83 to 1.5 ng/ml. The percentage follow up of patients at 1 year was 67%, at 2 years was 45% and at 3 years was 28%.

Conclusions: SG is an effective metabolic procedure for obese diabetic Indian patients achieving good glycemic control in short to medium term, similar to reported outcomes after Roux-en-Y Gastric Bypass. Longer follow up will reveal its efficacy in maintaining the remission of T2DM.

P.881

PROXIMAL AND DISTAL LOOP DUODENO-ENTEROSTOMY SHOW SIGNIFICANT AMELIORATION OF GLUCOSE TOLERANCE IN OBESE ZUCKER RATS 3 MONTHS AFTER OPERATION

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Background: Metabolic surgery is known to have great impact on glucose tolerance. The exact mechanism is not clear to date. With the aim to evaluate to what extent ileal stimulation is necessary to achieve amelioration of Type 2 diabetes (T2DM), we evaluated a proximal and distal loop duodeno-enterostomy in obese Zucker rats.

Materials and Methods: We performed either a loop duodeno-jejunosomy (DJOS) with exclusion of 1/3 of total intestinal length, a loop duodeno-ileostomy (DIOS, exclusion of 2/3) or a sham operation on 8 week-old male obese diabetic Zucker rats. 4 and 12 weeks after operation we performed an oral glucose tolerance test (OGTT) and monitored the increase of weight.

Results: Animals who underwent DJOS and DIOS procedures presented with significantly lower glucose blood levels already in the 4 weeks OGTT compared to SHAM animals (two-way ANOVA $p < 0.0001$). At this time, there was no significant difference between DJOS and DIOS animals.

12 weeks after surgery, DIOS and DJOS operations both significantly ameliorated glucose tolerance compared to SHAM animals (two-way ANOVA $p < 0.0001$). Interestingly, DJOS animals presented with a significantly better glucose tolerance than DIOS animals (two-way ANOVA $p = 0.0163$) despite a higher body weight in this group (DJOS 494 gram \pm 17 (486-521) vs. DIOS 458 gram \pm 22 (408-521); $p = 0.0346$).

Conclusions: This study shows that the improvement of T2DM after loop duodeno-enterostomies is most likely caused by duodenal exclusion and somewhat questions the need for extensive hindgut stimulation.

P.883 LAPAROSCOPIC SLEEVE GASTRECTOMY AS A EFFECTIVE METHOD OF TYPE 2 DIABETES AND METABOLIC SYNDROME TREATMENT

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Background: Laparoscopic sleeve gastrectomy (LSG) gains attention as an efficient method of morbid obesity treatment and also its co-morbidities: type 2 diabetes and metabolic syndrome.

Aim: The aim of the study was to evaluate the influence of LSG on treatment of type 2 diabetes and metabolic syndrome with 2-years follow-up in own material.

Methods: Clinical material included 100 patients with type 2 diabetes and metabolic syndrome after LSG in 2007-2012. Changes in concentrations of glucose, insulin, glycosylated hemoglobin, HOMA IR, lipid profile were analyzed before and 1, 6, 12 and 24 months after surgery. Influence of the LSG on recovery from diabetes depending on its duration before the surgery and methods of its treatment was also analyzed.

Results: In 2-years follow-up, statistically significant decrease of BMI was obtained along with decrease of glucose, insulin and glycosylated hemoglobin concentrations as well as significant improvement of lipid balance. Total recovery from diabetes was observed in 64% of patients 24 months after the surgery. Faster recovery from diabetes was observed in patients who suffered from the disease for shorter period of time and were treated with oral hypoglycemic agents.

Conclusions: LSG is an efficient procedure leading to permanent body mass loss and in high percentage of patients to recovery from type 2 diabetes and metabolic syndrome.

P.884 COMPLICATIONS AFTER LAPAROSCOPIC GASTRIC BANDING IN OWN MATERIAL

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Background: Laparoscopic adjustable gastric banding is a bariatric procedure which brings the highest number of complications. However, in many countries it still remains one of the most popular methods of morbid obesity treatment.

Aim: The aim of the study was to present complications after LAGB in own material.

Methods: In the 1st Department of General and Endocrinological Surgery (2005-2013) in 130 patients adjustable gastric banding was applied. The group consisted of 80 women (61.5%) and 50 men (38.5%).

Results: In the analyzed material 38% of patients developed at least 1 complication. Among early complications, injury of diaphragm, pneumothorax, gastric perforation and thrombophlebitis were observed. Among late complications, oesophagitis, infections around the port, migration of the gastric band into the gastric lumen, band slippage, vomiting and lack of body mass loss were observed. After each year approximately 1% of patients need removal of the band (the most common reason: band slippage, migration to the gastric lumen, extension of gastric reservoir).

Conclusions: Despite the fact that LAGB is connected with high risk of different complications requiring surgical intervention it is still recognized as one of the easiest and shortest procedures with short time of hospitalization. The results of our study indicate that complications after LAGB are most frequent in first years after the surgery which is similar to observations of other authors.

P.885**REFEEDING SYNDROME: AN IMPORTANT COMPLICATION FOLLOWING OBESITY SURGERY****S. Chiappetta**¹, J. Stein^{2,3}, R. Weiner¹¹ *Department of Bariatric and Metabolic Surgery, Sana Klinikum Offenbach, Offenbach/Main, Germany.*² *Crohn Colitis Centre Rhein-Main, Frankfurt/Main, Germany*³ *Gastroenterology and Clinical Nutrition, Krankenhaus Sachsenhausen, Frankfurt/Main, Germany*

Introduction: Refeeding syndrome (RFS) is an important complication in malnourished patients that can occur after oral, parenteral or enteral resumption of nutrition. In the current literature, only three cases of RFS after obesity surgery are described. We present a case of RFS subsequent to biliopancreatic diversion in a morbidly obese patient with a BMI of 41.5 kg/m².

Case report: A 48-year old female patient with a global malabsorptive syndrome after biliopancreatic diversion was transferred to our hospital due to Wernicke's Encephalopathy. Parenteral nutrition, vitamin supplementation and high-dosed intravenous thiamine supplementation (300mg/day) were initiated. After 14 days, the patient started to develop acute respiratory failure due to pulmonary oedema, necessitating non-invasive ventilation. Neurological functions were impaired. Blood values showed significant electrolyte disturbances including hypopotassaemia, hypomagnesaemia and severe hypophosphataemia of 0.9mg/dl (0.05mmol/l). Refeeding syndrome was diagnosed and managed according to guidelines of the National Institute for Health and Clinical Excellence (NICE) with appropriate fluid balance and micronutrient replacement. After 14 days, phosphate levels had returned to the normal range (3.8mg/dl) and neurological symptoms were improved. The patient showed no mental confusion and was able to begin self-mobilisation.

Conclusion: Extreme weight loss following obesity surgery has been shown to be associated with undernutrition. These patients are at high risk for evolving RFS upon recommencement of increased nutritional intake. Awareness of RFS as a postsurgical complication in obese patients, the identification of patients at risk, as well as prevention and correct management, should be a matter of priority at every bariatric centre.

P.886**THE LRYGBP: THE IDEAL BARIATRIC OPERATION.****Fabrizio Bellini**, Michele Tarantini, Marzia Vignoni*Azienda Ospedaliera Desenzano*

Introduction: The ideal operation to manage bariatric patients has not yet been defined. Many operation have been proposed trough the years, but most of them were abandoned for inefficacy or high rate of complications. The LRYGBP since its introduction in 1994, has rapidly gained popularity all over the world. In fact is a highly successful approach to morbid obesity, with low percentage of complications and long-lasting results.

Method: A total of 450 patients underwent LRYGBP between 2010 to 2014 in a way we call "*simplified technique*". Same surgeon, same technique: antecolic, antegastric, surgeon at the right of the patient, jejunal partition at the end of the operation with the possibility to check both anastomosis. The meticulous standardization of the technique is the prologue of excellent results.

Results: Data on patient demographics, operative variables and postoperative outcomes were collected prospectively and reviewed retrospectively. No deaths. The blue test was positive in 3 patients, treated with extra stitch. Postoperatively: 1 early jejunal leak due to rough handling treated laparoscopically, 1 gastro-jejunal leak as consequence of endoscopic cauterization in postoperative hemorrhage, 2 drains decubitus treated conservatively with drain retraction, 1 late gastro-jejunal leak treated conservatively. EWL at two years 74%.

Conclusion: Lifelong emotional support, dietary counseling, and nutritional monitoring are keys to any weight loss surgery program. In such a multidisciplinary bariatric approach, we consider the LRYGBP the ultimate and most successfully bariatric procedure with the best long term results, low complications rate, patient satisfaction and a good quality of life restoring.

P.893**EARLY RESULTS OF GASTRIC BYPASS WITH METABOLIC LIMB TO TREAT TYPE 2 DIABETES IN OBESE PATIENTS****Cacio Wietzycoski**¹, Grasiene Garbellotto¹, Aline D'avila¹, Camila De Oliveira¹, Patricia Cruz¹, Cristina Oliveira¹, Rodrigo Dallegrave da Silva²¹ *Unimed Vale do Cai Hospital*² *Bruno Born Hospital*

Introduction: Obesity and type 2 diabetes are frequently associated and have high rate of complications despite the best clinic treatment available. Bariatric surgery has been proposed as the most effective treatment for patients with type 2 diabetes mellitus (T2DM) and body mass index (BMI) above 30 kg/m².

Objectives: The purpose of our study was to access remission rate and improvement of metabolic control of T2DM after gastric bypass modified by a long biliopancreatic limb of 150 cm and a jejunal limb 120 cm long

Methods: Obese patients with T2DM that underwent Roux-en-Y gastric bypass with a long biliopacreatic limb (metabolic limb) were prospectively evaluated with regards to body weight, body mass index (BMI), percentage of excess BMI lost (% EBML), fasting

glucose, HbA1c and lipid profile up to a median of 12 months after surgery. This abstract show the early results of the firsts 12 patients who underwent Roux-en-Y gastric bypass with a metabolic limb.

Results: The patients were 75% female and before surgery had a mean BMI of 44.8 ± 7.46 kg/m² and HbA1c of $7.5 \pm 0.69\%$. After a mean time of follow-up of 12 ± 4.72 months, the mean of HbA1c was 5.73 ± 0.48 and mean of BMI was 30.85 ± 5.82 . (Fig: 2 and 3) No serious complications were reported.

Conclusion: Gastric bypass with metabolic limb in obese patients and diabetic patients is safety and associated with a high remission rate of diabetes at 12 months. Prospective controlled trials comparing with classical Gastric Bypass are encouraged to confirm these early results.

P.895 SINGLE STAGE PRECISE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN THE TREATMENT OF ASIAN SUPER OBESE PATIENTS

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Background: The aim of this study is to investigate the surgical techniques and clinical outcomes of precise laparoscopic Roux-en-Y gastric bypass (PLRYGB) in treatment of Asian super obesity with BMI \geq 50.

Methods: Clinical data was collected and analyzed in consecutive patients underwent PLRYGB in the First Affiliated Hospital of Jinan University between 2011 and 2014. 35 patients in super obesity group with BMI \geq 50, and 35 patients in ordinary obesity group with BMI $<$ 50 as a control. Patients were followed up regularly after surgery.

Results: No any conversion to open operations or deaths. Preoperative BMI were (ordinary obesity group vs super obesity group) 37.4 ± 4.6 kg/m² and 59.3 ± 3.9 kg/m², respectively (P $<$ 0.05). Compare with baseline, the BMI decreased gradually and reach the peak one year after the operation in both groups: 26.5 ± 3.7 kg/m² and 34.7 ± 5.6 kg/m², respectively (P $<$ 0.01). %EWL in 12 months of the two groups were: $81.7 \pm 7.6\%$, $75.3 \pm 16\%$, respectively (P $<$ 0.05). The %EWL in super obesity group was lower than that in the ordinary obesity group (P $<$ 0.05). Co-morbidities including fatty liver, hypertension, T2DM, hyperuricemia, sleep apnea and hyperlipidemia were cured or relieved after one year of operation. Mild postoperative complications were observed in the two groups, including 10 cases of hair loss and 4 cases of dumping syndrome. Occurrence of loose skin after surgery is higher in super obesity group (6 cases, 17.1%) than that in ordinary obesity group (2 cases, 5.7%), P $<$ 0.05.

Conclusions: PLRYGB is safe and feasible as a single stage operation for Asian super obese patients. The %EWL in ordinary obesity group is higher than that in super obesity group after one year of operation. Preoperative weight loss may be favorable in overall weight loss outcomes. Occurrence of loose skin after surgery is higher in super obesity group.

P.896 REVISIONAL BARIATRIC SURGERY: GUIDELINES, PROCEDURES, PITFALLS AND SOLUTIONS: 67 PATIENT META-ANALYSIS

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Background: Over the past decade bariatric surgery gained the limelight as a premier form of permanency with respect to weight loss. Today, nearly 30% of the worlds' population is considered mildly and/or morbidly obese. Consequently, several surgical procedures were developed to alleviate the worldwide obesity epidemic. The most common of these procedures include, Longitudinal Sleeve Gastrectomy (LSG), Roux-en-Y gastric bypass (RYGB), and Gastric banding (GB). Each with its varying levels of efficacy, every bariatric procedure is not a viable option for all patients. Moreover, selection of a well-suited bariatric procedure does not guarantee weight loss, even with strict adherence to diet and exercise regimens. As a result, several surgeons have developed the expanding field of revisional bariatric surgery, uncovering the hormonal/anatomical basis for weight regain in patients. The following review discusses the epidemiology of obesity, markers for re-operative therapy, optimal surgical procedures for fail bariatric patients, and multidisciplinary management for this unique patient population.

Methods: The following study consists of sixty-seven (n=67) reoperative bariatric patients (Male=34, Female=33) with ages ranging from 24-61 years of age who received varying of revisional bariatric procedures. All patients received weight check and blood workup and general examination pre-operatively and post operatively at 1 week, 1 month, 3 month, 6 months and 1 year. All patients were enrolled in Bariatric/Metabolic Center of Excellence at RWJUH and subject to all requirements including nutrition, exercise, and support group regimens. Patients were accessed for excess weight loss, resolution of comorbidities, complications, vitamin deficiencies, and general quality of life.

Results:

	Male	Female
Excess Weight Loss After Initial Bariatric Procedure	25%	18%
Excess Weight Loss After Revisional Bariatric Procedure	100%	100%
Complication Rate	0%	0%
Vitamin Deficiency	0%	0%

Conclusions: Surgery for failed bariatric patients has particular risks and benefits that must be accounted for when considering an invasive re-operative approach due to their unique physiological, psychological and emotional needs. As such, reasonable guidelines are necessary to ensure successful/safe weight loss in reoperative bariatric patients.

P.904**LESTI GASTRIC BYPASS PERFORMED ON A SLEEVE GASTRECTOMY FAILURE**

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Introduction: Laparoscopic sleeve gastrectomy (LSG) has gained popularity as a stand-alone procedure with good short-term results for weight loss. However, in the long-term, weight regain and other complications are reported. Demand for secondary surgery is rising, partly for these reasons.

Objectives: In this video we describe surgical efficacy of the revisional surgeries: Lesti gastric bypass after sleeve gastrectomy failure.

Methods: When viewing tubulization outcomes of gastric sleeve. Riresection portion of the gastric pouch with a stapler 60 for intestinal tissue. A GoreTex® mesh misurated on 36Fr is positioned at a distance of 7 cm from the cardias and fixed by an unabsorbable braided wire that makes a communication between the gastric pouch and the portion of the stomach excluded. The Treitz's ligament is recognized and the jejunum is misurated to create the bypass at the distance of 50 cm from the biliopancreatic tract and 150 cm from the alimentary tract. The gastric bypass is created using the dual-loop technique. Gastrointestinal anastomosis is made with a 45 mm linear stapler for intestinal tissue, entero-enteric anastomosis with a 30 mm linear stapler for vascular tissue. The section of the ileum is performed with a vascular linear stapler 60 mm. The incisions are closed with vicryl 4/0 sutures.

Conclusion: Lesti gastric bypass as a Revisional bariatric surgery can be successfully performed via a laparoscopic approach with acceptable risk.

P.905**EARLY POSTOPERATIVE PROGRESSION TO SOLID FOODS IS SAFE AFTER ROUX-EN-Y GASTRIC BYPASS**

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Introduction: Even though admission-time is significantly reduced with the implementation of various enhanced recovery protocols, many clinics still instruct patients after weight loss surgery to maintain a fluid or minced-food diet for at least 2 weeks postoperatively. We reasoned that with adequate pre-operative instructions, including adequate chewing of all foods, early progression to solid foods would not increase the risk of (gastro-)enterostomy leakage.

Methods: In December 2010 a new dietary protocol was implemented for all patients undergoing a Roux-en-Y gastric bypass, allowing progression to solid foods from 12 hours post-procedure onwards. All patients received thorough preoperative eating instructions and eating-awareness counselling from a qualified dietician and psychologist. A retrospective study was performed of 936 patients who underwent a primary or redo laparoscopic Roux-en-Y gastric bypass between January 2011 and June 2014 in our hospital. All 30 day complications, readmissions and reoperations were noted.

Results: No 30-day loss to follow-up occurred. Overall 30 day complication rate was 9.4%, with gastro-intestinal leakage occurring in only 0.6%. A low threshold for readmission was maintained due to the short mean admission time of 1.87 days. Readmission rate was 4.8% -mainly for observation of postoperative pain- and 1.8% of our patients required reoperation within 30 days. Mortality was 0.1%. Our results are comparable to results published by other Dutch centres advocating conventional diets, showing no increase in leakage or other complications.

Conclusions: We conclude that early progression to solid foods after Roux-en-Y gastric bypass surgery is safe as no increase in complication rate is observed.

P.909**HYBRID LAPAROSCOPIC-ROBOTIC GASTRIC BYPASS: LESSONS FROM THE LEARNING CURVE**

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Introduction : Robotic Roux-en-Y gastric bypass is still controversial due to the added learning curve associated morbidity (LCM) over the classical laparoscopic procedure. The aim was to minimize the learning curve associated morbidity of patients who underwent roboticRYGBP.

Methods: hybrid laparoscopic-robotic RYGBP (HLR-RYGBP) were performed with Da Vinci surgical system (SI HD) for sutured gastro-jejunal anastomosis (SGJA). A retrospective analysis of a prospective database included 142 initial and consecutive patients after HLR-RYGBP performed between 2012 and 2014

Results: 80 % of patients were women. The mean BMI was 41 kg/m² (35 to 56 BMI). Mean operative time was 80 minutes (70 -120 minute), including cholecystectomy. There was no peri-operative morbidity. Mean hospital stay was 4 days (3 - 15 days). Postoperative (<30 days) morbidity and mortality rates were 0.7% (Clavien ≥3) and 0 %, respectively. Midterm morbidity (>30days) was 7% due to G-J. ulcers (2.8%) or strictures (4.2%). One stricture required reoperation (0.7% ; Clavien ≥3).

Conclusion: HLR-RYGBP approach to gastric bypass is a good compromise for initial learning curve and patients safety. Therefore, none of the morbidity was linked to robotic procedure. During the learning curve, the hybrid approach is no inferior to classic laparoscopy. The safety of robotic SGJA confirms the advantage of 3-D vision and suture skill over classical approach.

P.911

A RARE COMPLICATION AFTER GASTRIC BYPASS: THROMBOSIS OF A BRANCH OF THE PORTAL VEIN

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Introduction: Thrombosis of the portal vein or one of its branches has been documented after laparoscopic procedures; however it is very rare after bariatric surgery. Several etiologies have been suggested (infection, inflammation, trauma, malignancy...)

Objectives: Early diagnosis and treatment of this entity may avoid its progression.

Methods: A 61-year-old diabetic woman, with previous history of deep venous thrombosis, underwent gastric bypass for morbid obesity. The operation was performed in a standard technique (Lonroth). Operative time was 120 min. The left lobe of the liver was retracted with a liver retractor held by an articulated arm. Postoperatively the patient received preventive dose of low molecular weight heparin twice daily. On the third postoperative day, the patient started to have abdominal pain, fever and leukocytosis (23000/mm³). An enhanced CT scan of the abdomen and pelvis showed thrombosis of left branch of the portal vein with signs of liver ischemia. There were no signs of anastomotic leak.

Results: Therapeutic dose of low molecular weight heparin was started. The patient had progressive significant improvement over few days. CT scan 4 weeks later showed complete resolution of the portal vein thrombosis and anticoagulation was stopped at 8 weeks postoperatively.

Conclusion: Our patient presents multiple risk factors of venous thrombosis. However this isolated thrombosis of a branch of the left portal vein suggests a traumatic factor due to the liver retractor held by an articulated arm for more than an hour. Therefore, while operating patients with multiple risk factors, we recommend a gentle and intermittent retraction of the left lobe of the liver whenever possible

P.912

METHODS FOR STANDARDISING AND MONITORING SURGICAL INTERVENTIONS IN RCTS OF SEVERE AND COMPLEX OBESITY

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on behalf of the By-Band-Sleeve Study Management Group¹

Introduction: Multi-centre randomized controlled trials (RCTs) in bariatric surgery are challenging, yet they are important to inform clinical decision-making and health policy. It is particularly difficult to establish standards of the surgery within a trial and monitor whether interventions are undertaken and delivered as intended within in the protocol.

Objectives: This study developed and tested methods for intervention design and monitoring within the internal pilot phase of a multi-centre RCT of bariatric surgery, the By-Band-Sleeve Study.

Methods: In the pilot phase, three phases of work were undertaken, i) Literature searches and in-depth analysis of intervention reporting in RCTs in surgery to establish a typology for intervention design, ii) Qualitative interviews with trial surgeons and non-participant observation of trial procedures to identify core components of interventions, and, iii) meetings with surgeons to agree the intervention protocols. In the main trial the adherence to the protocols is being monitored.

Results: Some 80 RCTs with reporting of 160 interventions informed the new typology which provides guidance for intervention description and monitoring based upon, i) the overall trial design and ii) the developmental stage of an intervention. It recommends identifying core components and steps of interventions and agreeing on whether each is mandated, optional or prohibited within the trial. The qualitative work with five bariatric surgeons and non-participant observation of procedures identified key steps of the

procedure and flexible approaches to achieving them. The By-Band-Sleeve protocol has been amended and monitoring of the core steps and adherence to intervention design is underway in six centres (18 surgeons).

Conclusions: In multi-centre large scale RCTs there is a need for standards of surgery. These methods are pragmatic and can be applied and monitored during a trial. Future work will develop feedback mechanisms for surgeons for protocol deviations and lack of adherence to standards.

P.914 LAPAROSCOPIC SLEEVE GASTRECTOMY IN THE MANAGEMENT OF METABOLIC SYNDROME. OUR EXPERIENCE.

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Introduction: The rapid reversal of diabetes, hypertension, hyperlipidaemia and obesity by bariatric surgery has challenged the management of metabolic syndrome. Sleeve gastrectomy, which developed initially as a first-step procedure for biliopancreatic diversion with duodenal switch, has seen an exponential rise in popularity as an effective alone laparoscopic bariatric procedure.

Material and method: We encountered 268 pts with sleeve gastrectomy performed between 2010 and 2014. From these pts we study 134 pts with metabolic syndrome, with a median follow-up period of 18 months (range 12-52 months). We prospectively collected data regarding EWL, blood pressure, diabetes mellitus, hormonal status and lipidic profile of the patients.

Results: Diabetes mellitus remission after sleeve gastrectomy – 87.67%, hypertension remission is 63.82 %, The most significant value was for sleeve gastrectomy – 74.45 % after 1 year, EWL was 74.45 % after 1 year.

Conclusions: Superior excess weight loss, a low complication rate, and excellent food tolerance, combined with a short hospital stay, have made this the procedure of choice for patients and surgeons across the globe. Optimum surgical outcomes allow minimization of metabolic syndrome, reducing cardiovascular and cerebrovascular risk.

P.915 AN ANATOMICAL LANDMARK TO FACILITATE THE RETRO GASTRIC DISSECTION DURING A GASTRIC BYPASS

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Introduction: The visualization of the left diaphragmatic crus is a crucial step during the retro gastric dissection in a gastric bypass. This is not always obvious especially in the beginning of the learning curve.

Objectives: Describing an anatomical landmark that may guide the surgeon during this step of the procedure.

Methods: 20 gastric bypass procedures were studied. During the creation of the gastric pouch, when proceeding to the vertical dissection to reach the diaphragmatic crus; we can always identify, a layer behind the gastric fundus, near in the area of short gastric vessels that is avascular, and easy to dissect. Obviously, to reach the left crus of the diaphragm, the dissection must be done medial to this zone. We measured peroperatively, the distance between this area where the dissection seems easy and the tunnel created in the retro gastric fat to reach the left crus.

Results: In 19 procedures, this distance was nearly constant (2 to 2.5 cm) and in one case it was 3 cm.

Conclusion: Because of the complexity of retro gastric dissection, surgeons in their learning curve of gastric bypass tend to create a large gastric pouch.

We recommend during the vertical step of retro gastric dissection to:

- Identify the avascular layer behind the gastric fundus that seems easy to dissect
- Measure approximately 2.5 cm medial to this area;
- Continue the dissection vertically reaching the left crus of the diaphragm.

A study on a larger number of cases is needed for further confirmation of this mark.

P.921 TOTAL SMALL BOWEL NECROSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction: Small bowel ischemia and necrosis is relatively uncommon surgical complication, with difficult diagnosis and potentially severe consequences due to higher risk of mortality. The purpose of this study was to present a rare patient who developed post operation small intestine necrosis after Laparoscopic Sleeve Gastrectomy.

Material and Methods: A 29 years old man underwent an uneventful laparoscopic sleeve gastrectomy for the treatment of morbid obesity, and presented on post operation day 10 with non focal abdominal pain, nausea, vomiting and leukocytosis. Computed tomography revealed portal vein thrombosis and mesenteric vein thrombosis.

Results: In reoperation laparotomy, there was total intestinal necrosis from Treitz ligament to hepatic flexure of colon. So, total intestinal resection was done. Unfortunately, the patient was expired 2 weeks after reoperation.

Conclusion: Portal vein thrombosis may be identified with increasing frequency as the number of laparoscopic bariatric operations continues to increase. A high index of suspicion is necessary to diagnose this rare, but potentially lethal, complication.

P.922
POSTOPERATIVE ALERT CARDS FOR BARIATRIC SURGICAL PATIENTS TO INCREASE KNOWLEDGE, CONFIDENCE AND MANAGEMENT IN PRIMARY CARE SERVICES.

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Background: NICE estimates that 257,000 people in England could qualify for bariatric surgery. It is imperative that primary care clinicians feel confident in postoperative management of these patients. Our national survey of 2417 GPs highlighted the need for greater education and awareness of guidelines for safe and confident patient management.

Methods: We created a double-sided, business-card-sized alert card to give to each postoperative patient, tailored to the surgical procedure (sleeve, bypass or band). The cards have the patient's specific procedure and date, surgeon, hospital and nutritional supplements required on the 'patient side'. The healthcare professional side highlights key information regarding postoperative blood test scheduling, specialist referral criteria, and a link to the BOMSS guidelines.

Results: We are confident that this will educate patients and increase their understanding of their surgery and postoperative care. It will also improve GP's knowledge of and access to vital information needed for safe, confident and effective postoperative management in primary care. Initial feedback from GP's, practice nurses and patients has been very positive and we intend to conduct a formal survey to elicit constructive criticism.

Conclusions: This project will improve GP and patient education regarding an increasingly common specialist surgical procedure and develop confidence among healthcare professionals in primary and secondary care in managing this growing population of patients.

P.924
BMI AFFECTS DM REMISSION RATE AFTER ROUX-EN-Y GASTRIC BYPASS IN KOREAN PATIENTS.

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Introduction: In Korea, about 3.5 million people (11.1%) had diabetes in 2013, although obesity prevalence of Korea is about less than 5%. Recently metabolic surgery introduced for manage of type 2 diabetes but there are many debates for what are the major clinical factors for prediction for remission.

Objectives: BMI is considered as one of the factors but it is rarely evaluated for Korean patients who received GBP. We reviewed the data of single center for evaluating relationship between preoperative BMI and DM remission rate after surgery.

Methods: 99 patients were enrolled from 2009 to 2011. We divided the patients as three groups by obesity classification of WHO. We defined HbA1c < 5.7% as CR, HbA1c is < 6.4% as PR, and HbA1c > 6.5% as stable disease. We did the evaluation of the difference of DM remission rate between 3 groups.

Results: In obesity class I group, 8 of 35 patients has shown CR(22.9%), 8 PR(22.9%). In class II group, 9 of 18 patients has shown CR(50%), 5 PR(27.8%). In class III group, 13 of 17 patients has shown CR(76.5%), 3 patients PR(17.6%). By this study, higher obese group shown higher DM remission rate. (p-value =0.001) Then we can tell that more obese patient will be shown higher DM remission rate.

Conclusions: We can expect better result of RYGB for DM remission in higher BMI Korean (far east Asian) patients. Despite of small number, this study enrolled about 50% of GBP patient in Korea during that period.

P.927
OUTCOME OF LAPAROSCOPIC GASTRIC BYPASS (LRYGB) WITH ENHANCED RECOVERY AFTER SURGERY (ERAS) PROGRAM

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Background: Enhanced Recovery after Surgery (ERAS) programs are well established for patients undergoing colorectal surgery. Relatively little is known about ERAS following bariatric surgery in general or following laparoscopic Roux-en-Y gastric bypass (LRYGB) in particular.

Patients and Methods: Prospective, observational study of 388 consecutive patients that underwent LRYGB with ERAS. Mean (SD) baseline Body Mass Index (BMI) and age was 46.4 (6.7) kg/m² and 45.1 (11.2) years, respectively. Fifty-four % of the patients were on medication for hypertension arterialis (HTA) and 38% for type 2 diabetes mellitus (DM2). The ERAS protocol included modifications of pre-, intra-, and postoperative routines. Primary outcome measures were length of stay (LOS), postoperative morbidity, readmissions and reoperations. Secondary outcome measures were weight loss (WL), excessive BMI loss (EBMIL), and resolution/improvements of the most common obesity related comorbidities, DM2 and HTA until 1-2 years follow up.

Results: Mean (SD) and median (range) operative time was 73.8 (16.9) and 65 (40-143) minutes, respectively. Mean LOS was 1.3 days (1.1), median 1 day (1-14). Of all patients, 322 (83%) were discharged on postoperative day (POD) 1. Overall morbidity was 9.5%. Three patients (0.8%) had life threatening complications. The readmission rate was 5.2% and 3.6% had to be re-operated. With a follow up (FU) rate of 83% at 1 year WL was 31% and EBMIL 70%. Total remission of DM2 and HTA was achieved in 70% and 42%, respectively.

Conclusion: Early discharge following LRYGB with ERAS is possible and safe and does not seem to increase postoperative morbidity.

P.928 LAPARO-ENDOSCOPIC GASTROSTOMY (LEG) DECOMPRESSION IN MANAGING GASTRIC LEAKS FOLLOWING SLEEVE GASTRECTOMY: AN ALTERNATIVE FOR STENTS?

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Background: Leakage is the most feared and challenging complication following laparoscopic sleeve gastrectomy (LSG) as it can either be life-threatening or lead to major morbidity. Its management can be very complex. Endoscopic stents seem to be the mainstay of the current modality of treatment but are associated with a high rate of complications and also need supportive procedures for sepsis control and feeding. We aimed to approach this problem through a one-step intervention, achieving three objectives: a prolonged decompression of the gastric tube through a laparo-endoscopically placed gastrostomy, feeding jejunostomy and external drainage.

Methods: Between 2014 January to March 2015, seven patients were managed for gastric leaks (post LSG) in our center by this novel approach. Their records were reviewed for details like prior operation, presence of co-morbidities, revisional surgery, day of presentation following surgery, intraoperative findings, post op recovery, length of hospital stay and time to heal. The results were tabulated and studied.

Results: Two (28%) were post primary LSG. Four (57%) were revisional surgeries. Six (85.7%) healed without alternative intervention. One patient with a large rent was managed by fistulojejunostomy. The average length of stay was 20.7 days. All patients were on post operative enteral feeding through jejunostomy. There were no gastrostomy related complications.

Conclusions: Laparo-endoscopic Gastrostomy (LEG) decompression is a feasible, single-step, successful procedure in managing post LSG leaks and may be a viable alternative to avoid stent related morbidity.

P.931 FIRST SLEEVE GASTRECTOMY SERIES IN AZERBAIJAN

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Introduction: Morbid obesity is one of common pathologies nowadays. Statistic results show increasing trend all over the world. While 31% of USA population has any type of obesity American Society for Bariatric and Metabolic Surgery and International Diabetes Federation consider this rate will be as high as 54% by 2050. Despite absence of official statistics number of morbid obesity patients in Azerbaijan is steadily growing.

Objectives: To start a series of bariatric operations in Azerbaijan with analysis of their results.

Methods: We have operated 18 patients with morbid obesity 2012 through beginning of 2015. There were 4 males and 14 females. Age of patients varied from 27 to 51, mean 40.7 years old. Weight of patients was 112-220 kg with according BMI 42 – 80.2, mean 59.5. 2 patients suffered from type 2 diabetes mellitus, 8 from arterial hypertension and 2 from sleep apnea syndrome. Most of female patients (12) had low level of follicle-stimulating hormone and sex hormone-binding globulin. All patients had grade 3-4 fatty liver disease. 16 patients underwent a laparoscopic gastric sleeve resection and 2 patients underwent an open Roux-en-Y gastric bypass surgery.

Results: There was no intraoperative complication. 1 patient developed bleeding and abscess formation after a sleeve resection controlled by relaparoscopy. There was no mortality. Reduction of BMI 3 months after surgery varied from 11 to 22.2, mean 14.2. We continue the follow-up of patients.

Conclusion: The first results of applications of bariatric surgery in Azerbaijan are encouraging. Low morbidity and correction of concomitant metabolic disorders must help in further increase of number of patients. Laparoscopy is an optimal choice for gastric sleeve resection.

P.934
POSTOPERATIVE TIME-DEPENDENT CORRELATION BETWEEN HBA1C-REDUCTION AND BODY WEIGHT LOSS AFTER BARIATRIC PROCEDURES IN KOREAN OBESE PATIENTS

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Introduction: During the last decade it has been recognized that the improvement in glycemic control without the need for a glucose-lowering medication can be achieved in obese patients with type 2 diabetes using bariatric surgery. The early mechanisms for improvement in glycemic control after bariatric procedures includes a lot of weight loss-independent pathways, however, it is generally accepted that remission of diabetes is associated with weight loss in the late period.

Objectives: The aim of this study was to examine the change of efficacy of surgically induced weight loss on reduction of HbA1c as time passed after bariatric surgery.

Methods: Using the database of Korean nationwide survey of bariatric surgery, obese patients with uncontrolled hyperglycemia (HbA1c > 6.5%) undergoing sleeve gastrectomy and Roux-en Y gastric bypass were identified. We analyzed the available preoperative information, body weight loss and HbA1c change at 1, 3, 6, 12, 24 months postoperatively, by logistic regression analysis.

Results: In univariate analysis, preoperative low HbA1c levels were significantly related with low HbA1c (HbA1c < 6.5%) at every postoperative period and weight loss has been significantly related since postoperative 3 months. Body weight loss has remained independent predictors of HbA1c reduction since postoperative 6 months by multivariate logistic regression analysis. Type of operation was not predictable factor of HbA1c at any period.

Conclusions: Body weight loss is a significant predictor of HbA1c reduction consistently after 6 months of bariatric surgery regardless of procedures. The main mechanism of improvement in glycemic control seems to be changed to the weight-loss dependent pathway at 6 months after bariatric surgery in Korean obese patients with type 2 diabetes.

P.935
EFFECT OF SLEEVE GASTRECTOMY PLUS SIDE-TO-SIDE JEJUNOILEAL ANASTOMOSIS ON WEIGHT LOSS AND DIABETES CONTROL IN A ZDF RAT MODEL

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Introduction: Sleeve gastrectomy plus side-to-side jejunoileal anastomosis (JI-SG) has shown some promising results for obesity and related metabolic comorbidities. But its effects on weight loss and diabetes control compared with pure sleeve gastrectomy has not been well studied.

Objectives: The aim of this study is to investigate the effects of JI-SG on weight loss and diabetes remission compared with pure sleeve gastrectomy (SG) on a ZDF rat model.

Methods: Thirty 7 weeks old male Zucker diabetic fatty (ZDF) rats were randomized into three groups: sleeve gastrectomy plus side-to-side jejunoileal anastomosis (JI-SG group), sleeve gastrectomy (SG group) and sham surgery (Control group). Body weight and fasting blood glucose were evaluated before and 1, 2, 4, 6, 8, 10, 12 weeks and plasma ghrelin, glucagon-like peptide 1 (GLP-1) and insulin were measured on 0, 6, 12 weeks postoperatively.

Results: The weight of rats in JI-SG and SG group were significantly lower than the control group at 2 weeks postoperatively. However, the weight in JI-SG group was significantly decreased than that in SG group from the 4th week postoperatively. The plasma glucose level was significantly decreased in both JI-SG group and SG group at the 2nd week after surgery. The plasma ghrelin level in JI-SG, SG group was significantly decreased, but without statistical difference between the two groups. The GLP-1 level in JI-SG group was significantly higher compared with SG and control groups at 12th weeks postoperatively. The plasma insulin levels were also

decreased in JI-SG and SG group at 6 weeks postoperatively, and the parameter in JI-SG group was significantly decreased than that in the SG group at 12 weeks postoperatively.

Conclusions: Sleeve gastrectomy plus side-to-side jejunoileal anastomosis appears to be a simple, considerably safe, and more effective procedure in the treatment of type 2 diabetes and weight control in this animal model.

P.936

LAPAROSCOPIC MINI GASTRIC BYPASS SURGERY IN KAZAKHSTAN

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Background: Laparoscopic Mini gastric bypass surgery (LMGB) is a relatively simple procedure that has been shown in various studies, have a low risk and result in a good short-term and long-term weight loss. In Kazakhstan until 2013 had no experience performing LMGB.

The aim of the present clinical trial is demonstration of preliminary results in patients with severe and morbidly obesity before and after LMGB.

Methods: From January 2013 to March 2015 were 43 patients undergoing mini gastric bypass. We reviewed the results before and after the LMGB results. This trial, was designed, conducted, and reported in accordance with the standards of the CONSORT (Consolidated Standards of Reporting Trials) Statement and BAROS (Bariatric Analysis and Reporting Outcome System).

Results: We did not have death and serious postoperatively complications (bleeding and leakage).

Median follow-up was 1 year. After surgery, mean BMI decreased from 43.1 ± 8.8 to 33.41 ± 6.7 Kg/m² ($P < 0.001$). Weight Loss (% of Excess Weight Lost) after 1 Year – 67.3%. Cost per procedure was \$ 2,500.

Conclusions: LMGB is an effective, relatively low-risk, safety and low-cost bariatric procedure.

P.937

MINI GASTRIC BYPASS, SHORT TERM RESULTS.

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Introduction: Roux en y gastric bypass bypass is a successful weight loss surgery together with a great impact on metabolic syndrome, Laparoscopic minigastric bypass is a new emerging bariatric surgery procedure with current debates regarding its efficacy and safety.

Objectives: Evaluation of laparoscopic minigastric byass on weight loss, Safety and associated metabolic diseases .

Patient and methods: the study was performed In Minoufiya university hospital in Egypt and other private hospitals. All patients underwent laparoscopic roux en y gastric bypass and followed up for 18 months .Its impact on BMI, %EWL,complications associated metabolic diseases were reported and analyzed at 6 , 12,18 months.

Results :80 patients were included in this study , 49 were female . 58 patients were diabetic,

62 patients were hypertensive , 69 patients were dyslipidemic. The mean operative time was 92 min. The %EWL was 77.3 % . The mean hospital length of stay was 3 days. One patient had anastomotic leak , 2 patients had biliary reflux and biliary gastritis and were managed by side to side jejuno-jejunosomy after failure of conservative treatment. One patient showed inadequate weight loss. One patient showed stomal ulcer . 47patients of type 2 diabetes patient returned to normal glucose level. 51 of hypertensive patients became normotensives. 59 patients showed improvement of lipid profile after 18 months .

Conclusion : Minigastric bypass is effective as other standard bariatric surgery procedures with good impact on associate metabolic diseases .

P.938

THE MALE BREAST AFTER MASSIVE WEIGHT LOSS

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Introduction: Both gynacomastia and pseudogynacomastia badly affect the male self- esteem and his social health. Severe skin sagging and severe ptosis give a feminine look of the male breast.

Objective: Evaluation of mastectomy with lateral skin excision and free nipple areola graft.

Patient and methods: 100 patients after massive weight loss were included in this study in Minoufiya university hospital in Egypt and other private hospitals. Evaluation included the degree of ptosis, duration after weight loss and associated lateral skin sagging. Evaluation of other areas if synchronous other contouring surgery are decided in the same session. Also marking of the topography of the distribution of the excess skin and localizing the new nipple areola complex, then free nipple areola full thickness graft were applied on the new position after skin de epithelialization.

Results: The patient age ranged from 24 to 44 years with a mean of 28.2 yrs. The operative time ranged from 70 to 120 min. with a mean of 90 min. 56 patients had synchronous other body contouring surgeries. 98 patients had satisfactory results after 6 months regarding breast size and chest appearance after mastectomy and free nipple areola graft. One patient (1%) had unilateral wound infection .One patient (1%) showed unilateral partial areola necrosis, 2 patients (2%) had hypertrophic scars.

Conclusion: The technique is fast and suitable when multiple body contouring surgeries are decided in the same session .

P.941
INTERACTIONS BETWEEN CALCIUM METABOLISM AND ANTI-REFLUX MEDICATION AFTER SLEEVE GASTRECTOMY

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Introduction: Malabsorption and micronutrient deficiencies are known problems after bariatric surgery. Therefore, supplementation and regular controls are inevitable. Calcium (Ca²⁺) levels, which may be disrupted after malabsorptive bariatric procedures, are known to depend on gastric pH levels.

Objectives: To determine the effect of proton pump inhibitors (PPI) on Ca²⁺, parathyroid gland hormone (PTH), and vitamin D levels after sleeve gastrectomy (SG).

Methods: All patients who underwent SG between 2008 and 2013 were enrolled in our follow-up program. The patients were examined preoperatively and then four times during the first year. Ca²⁺ metabolism and weight parameters were monitored. All the patients received 3000 mg of Ca²⁺ carbonate (equivalent to 1200 mg of Ca²⁺), 800 IE of vitamin D, as well as one multivitamin tablet daily. All the parameters were then analyzed for associations with PPI intake.

Results: Data of 385 out of 400 (96.2%) patients were analyzed after 1 year of follow-up (3.8% lost to follow-up). Thirty nine (10.1%) patients took PPI for at least three months during the first year. The Ca²⁺ levels were significantly lower (p < 0.0001) in the PPI group in comparison to the non-PPI group, although neither of the groups showed hypocalcaemia. The PTH levels showed an opposite behavior (p < 0.0001).

Conclusions: Our data show that higher gastric pH levels caused by PPI intake negatively influence Ca²⁺ absorption. Therefore, Ca²⁺ and PTH levels should be monitored, especially in patients receiving PPI therapy after SG.

P.949
WALTHER PETERSEN – THE MAN BEHIND THE HERNIA

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Background: The term “Petersen hernia” is mentioned during virtually every meeting and conference on bariatric surgery. Very little however is known so far about Walther Petersen himself, who described this complication for the first time.

Methods: We conducted a thorough research in the libraries and archives of the universities in Vienna and Heidelberg.

Results: (Gustav Adolph) Walther Petersen was born in 1867 as the son of a mining engineer in Ichenberg near Aachen, then belonging to the kingdom of Prussia. Petersen took up medical studies in Munich, Leipzig, Kiel, and Berlin, and graduated in 1891 from the University of Bonn. After shortly joining the department of dermatology there and later the institute of pathology in Zuerich, in 1895 he was admitted as surgical resident at the University of Heidelberg and elected professor of surgery in 1901. In 1904/05, he commanded an expedition of the German army medical corps to the Russo-Japanese war.

As a surgeon, he greatly contributed to the development of gastric surgery and he was one of the first physicians in Germany to apprehend the importance of the newly detected X-rays. In 1906, Petersen was appointed consultant in surgery at the *Diakonissenkrankenhaus* in Leipzig. He however went severely ill and had to be admitted to a psychiatric hospital in 1909. He died in 1922.

Conclusions: Retroanastomotic hernias after gastroenterostomy are named after Walter Petersen. We were able to shed light on the life of a man whose name is familiar to every bariatric surgeon worldwide.

P.950
IMPACT OF BARIATRIC SURGERY ON HEDONIC HUNGER IN OBESE PATIENTS. RESULTS OF A PROSPECTIVE STUDY
RUNNING TITLE: HEDONIC HUNGER AND BARIATRIC SURGERY

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Background: Tendency for consumption of highly palatable foods had been termed as ‘‘Hedonic Hunger’’. We prospectively analyzed the influence of bariatric surgery on hedonic hunger in adolescent obese subjects compared to a control group of non-obese, healthy subjects.

Methods: From January 2011 to April 2012 seventy-two obese subjects were submitted to bariatric surgery (Laparoscopic adjustable gastric banding-LAGB, laparoscopic sleeve gastrectomy -LSG, and laparoscopic Roux-Y gastric Bypass-LRYGB). Forty-four of these subjects (61%) were included in the study. Thirty seven patients were submitted to LSG (51%), 4 to LAGB (6%) and 3 (4%) to LRYGB. In the same period 23 healthy control subjects were included. Hedonic hunger was assessed with the German version of the validated ‘‘Power of Food Scale’’ (PFS) questionnaire preoperatively as well as after 6 months later.

Results: Total body weight (BW) as well as BMI differed statistically significantly between the two groups in all measurements ($P<0.001$). Six months postoperatively patients had a statistically lower body weight compared to preoperatively (29.114 ± 11.433 , $P<0.001$)

The initial aggregated PFS score was significantly higher in patients than in the control group (2.82 vs. 2.16, $P<0.002$). We found a significant reduction of aggregated PFS score and for all the three subdomains after surgery compared to preoperative values. The difference of the PFS scores (dPFS) before and after surgery among the 3 operative procedures performed was non-significant ($F= 1.43$, $P<0.249$). However the mean value of the dPFS was higher in the LSG group and this tendency was also seen when comparing the subdomain scores (dPFS1, dPFS2, and dPFS3). A significant correlation of BW and all PFS scores in the patients’ group was noticed.

Conclusion: Bariatric surgery modifies hedonic hunger in obese patients. Further studies are warranted in order to elucidate the exact mechanisms of this action.

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