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Presidents: F. Bianco, F. Selvaggi

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ORAL PRESENTATIONS & VIDEO

ENDOSCOPIC FULL THICKNESS RESECTION WITH ENDOSCOPIC SUTURING (EFTR-S) IN 111 RECTAL LESIONS: A SINGLE CENTER EXPERIENCE ON SAFETY AND EFFICACY

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Background The aim of this study is to evaluate the efficacy and safety of EFTR-S in rectal lesions. **Methods** From June 2014 to April 2021, 111 EFTR procedures were performed in 108 patients. Defects were closed with full thickness endoscopic suturing technique with OverStitch™. All resections were performed with flexible endoscopes only. Technical success and R0 resection rates were prospectively recorded and retrospectively analysed. 76 (68%) of 107 resections were recurrent lesions after previous endoscopic or surgical treatment. Indications for treatment were 96 mucosal lesions and 11 sub mucosal lesions. **Results** Technical success of the procedure was 99% and only 1 out of 111 lesions removal was not possible. Size of the lesion was 34.13 DS 4.75 (13–120) mm. Procedural time including suturing was 104.93 DS 27.18 (68–245) min.

Histopathology confirmed R0 in 97% of cases. 30-days complication rate was 4.71%: 2 bleedings, 2 suture dehiscence in patients RCT neoadjuvant, 1 sigma stenosis. At 30 days none complications required surgical intervention. Hospital stay was 1.89 DS 0.89 (1–7) days. In 100% of cases the tissue retrieved was adequate to formulate follow up therapy. **Conclusions** EFTR-S can be carried out safely and effectively. In our series we achieved 97% histological R0 rate which is in our opinion a critical factor to choose the most appropriate therapeutic approach. EFTR-S, provides a safe defect closure, expanding the possibility to treat these patients with a minimally invasive approach with low complication rates and fast patient recovery.

WHICH IS THE BEST METHOD TO DETECT AN ANASTOMOTIC LEAKAGE AFTER (COLO)PROCTECTOMY?

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Background Anastomotic leakage (AL) after colorectal/anal anastomosis still represents a quite frequent complication. The aim of this study is to evaluate the diagnostic accuracy of water-soluble contrast

enema (WSCE), contrast enema computed tomography (CECT) and endoscopy in identifying AL and to define which test is more accurate. **Methods** Systematic review and meta-analysis of 25 studies reporting diagnostic accuracy estimates conducted following the PRISMA-DTA guidelines and the Cochrane DTA protocol up to June 2021. Pooled estimates were evaluated for the three diagnostic methods and pairwise comparisons were conducted among diagnostic tests. **Results** Considering WSCE, the pooled Se, Sp, +LR, -LR and DOR were respectively 0.50, 0.99, 62.7, 0.51, and 124. The relative AUC was 0.91. For endoscopy, the pooled estimates were: Se 0.69, Sp 1.00, +LR 324.5, -LR 0.3, and DOR 1046, with an AUC of 0.99. The pooled Se, Sp, +LR, -LR, and DOR for CTE-scan were 0.89, 1.00, 375.1, 0.11, and 3526 respectively; the AUC was 0.99. The comparison between CECT and WSCE highlighted a significantly greater Se ($p = 0.04$) for CECT scan, whereas no differences were found for Sp ($p = 0.146$). Compared to CECT, endoscopy did not result significantly more accurate in terms of both Se ($p = 0.154$) and Sp ($p = 0.485$). Endoscopy was found to be significantly more specific than WSCE ($p = 0.031$) while no significant difference was pointed out for Se ($p = 0.59$). **Conclusions** WSCE is less accurate than both endoscopy and CECT. Although greater Se was demonstrated for CECT compared to endoscopy, this failed to be significant.

PREDICTORS OF ILEO-RECTAL ANASTOMOSIS, PERMANENT ILEOSTOMY AND RECURRENCE OF DISEASE AFTER TOTAL COLECTOMY FOR CROHN'S COLITIS: RESULTS OVER 20 YEARS.

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Background Patients with Crohn's colitis (CC) might undergo a total colectomy (TC) and ileo-rectal anastomosis (IRA), or TC and end ileostomy. A second-stage IRA is not always performed. The predictors of the different outcomes after TC are yet to be identified. **Methods** Retrospective study including 354 patients undergoing TC for CC (2000–2019). The aim was to identify the predictors for: (a) IRA (87 cases, 24.6%) vs. end ileostomy (267 cases, 75.4%) at the primary colectomy. (b) second-stage IRA (80 cases, 39%) vs. no IRA (125 cases, 61%) at the last follow-up. (c) recurrence of the disease after IRA (167 patients). The analysis was conducted using logistic and cox regression as appropriate. **Results** (a) Predictors against the IRA at TC: preoperative biologics (OR = 1.96, CI 1.15–3.33, $p = 0.014$), rectal Crohn's (OR = 4.17, CI 2.0–8.33, $p < 0.0001$), perianal disease (OR = 3.33, CI 1.75–6.25, $p < 0.0001$), low hemoglobin concentration (OR = 1.26, CI 1.01–1.58, $p = 0.037$). (b) Predictors of the risk of permanent ileostomy at follow-up: age (OR: 1.02, CI 1.00–1.04, $p = 0.045$), biologics before (OR 1.85, CI 1.11–3.03, $p = 0.017$) and after (OR 1.79, CI 1.11–2.89, $p = 0.018$) the TC. (c) Predictors of anastomotic recurrence (rate 8.7% and 30.8% at 5 and 10 years) were: female gender (OR 2.38, CI 1.11–5.55, $p = 0.046$), more than one biologic (OR 5.65, CI 2.18–9.89, $p < 0.0001$) and need for drug escalation (OR 5.51, CI 2.06–8.59, $p = 0.001$) during the follow-up. **Conclusions** The location and severity of the disease at diagnosis predict the long-term behavior of the disease. The exposure to biologics identifies a population at risk of permanent ileostomy. These predictors should be implemented in the assessment of patients affected by CC.

EARLY PREDICTORS OF SURGERY IN PATIENTS WITH ACUTE SEVERE ULCERATIVE COLITIS RESULTS OF THE MASC STUDY.

ESCP MASC Study Collaborative

Background Delayed colectomy for Acute Severe Ulcerative Colitis (ASUC) after failed salvage medical treatment increases post-operative complications. Several scores have been proposed to predict medical treatment failure, with limited predictive utility. Aim was to identify early predictors of failure to medical treatment and need of colectomy in patients with ASUC. **Methods** In a prospective, multicentre, international study, consecutive patients hospitalized for ASUC over a 1-year period were included. Data were uploaded in a secure online database. Need for surgery during the first 90 days was considered as the primary outcome. A multivariate regression logistic model was developed to identify early predictors of colectomy. The Study was led by the ESCP <https://tinyurl.com/vfwmahva>. **Results** Six hundred ninety-nine patients from 123 centres (32 countries) were analysed. 265(38%) had a previous admission for UC, and 39(6%) had undergone appendicectomy. 441(63%) were successfully treated medically; 258 (37%) required surgery. Median length of stay was 12 days and mortality rate 1%. In those requiring surgery, postoperative morbidity was 36%, surgical site infection rate 26% and reoperation rate 8%. Predictors of colectomy were being current smokers (OR 2.1, 95 CI 1.04–4.25), previous admission (OR 2.4, 95 CI 1.5–3.8), and previous appendicectomy (OR 8.2, 95 CI 3.2–20.9). **Conclusions** In the present series of patients with ASUC, the mortality rate was lower than previously described. Patients who currently smoked, with previous admission for UC, and with previous appendicectomy had an increased risk of medical failure and need for surgery. Some of the findings seem to be conflicting with available evidence and might need further investigation.

TOPICAL TREATMENT OF CONDYLOMATA ACUMINATA WITH IMMUNODERM®: RESULTS OF A MULTICENTRIC PROSPECTIVE OBSERVATIONAL STUDY

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Background Condylomata acuminata are a manifestation of HPV infection of the ano-genital epithelium. Recurrence is frequent after any type of treatment (20 to 50%). Topical therapy is usually administered in case of mild, early disease. **Methods** Immunoderm® (Depofarma, Mogliano Veneto, Italy) is a gel containing panthenol, tocopheryl acetate and P. granulosum extracts. Seventy-one patients were included in the study from January 15, 2018 and June 15, 2018. Exclusion criteria were immunodepression, extensive condylomatosis and other treatments in the previous six months. **Results** Median age was 33 years (19–65), with 71.8% of males. Median number of partners and duration of symptoms were 6 (1–98) and 3 months (1–18), respectively. Perianal disease regarded almost all cases (97.2%), while endoanal and genital warts were present in 54.9% and 23.9% of cases. After 30 days of treatment, complete regression occurred in 15 (21.1%) patients, while partial response and absence of response were reported in 34 (47.9%) and 22 (31%) cases. Thirty-seven (52.1%) patients underwent a second month of therapy. After a 6-month follow-up, complete or partial response was reported in 49

(69%) patients, while in 22 (31%) cases the disease remained stable or worsened. Twenty (28.2%) patients required cryotherapy and other 20 surgical intervention. Absence of clinical response resulted associated with a number of 10 or more partners and symptoms duration of 6 months or shorter ($p = 0.008$ and $p = 0.044$ at Chi-square test, respectively). **Conclusions** Immunoderm® may stimulate local response to HPV infection. High number of partners and short duration of symptoms seem to worsen the outcomes.

REALISE SCORE: A NEW STATISTICALLY VALIDATED SCORING SYSTEM TO ASSESS THE SEVERITY OF ANAL FISSURES

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Background Anal fissure (AF) is a common, painful disease that strongly affects patient’s quality of life, however, no scoring system to assess its severity is available in the literature. Aim of this study was to set-up and validate a scoring system to assess the severity of AF, in order to compare the efficacy and the outcomes of surgical/medical therapy in prospective trials. **Methods** Two independent researchers carried out a structured interviewer-led 5 items questionnaire two times at two different times (T1/T2). Pain was scored using a 1–10 VAS, quality of life, duration of the pain, painkillers pill intake, and bleeding were scored from 1 to 5 using a Likert-scaled symptom items. The REALISE score was the sum of all points. Patients with AF and a control group of patients with hemorrhoids, anal fistulas or obstructed defecation entered the study. Main outcome measures were reliability, inter/intra observers’ agreement, and repeatability. **Results** One hundred fifty well-matched patients (75 with AF and 75 controls) were enrolled. A significant difference was found between the mean REALISE score for patients with AF and controls ($p < 0.001$). The REALISE scores of the two operators were highly correlated ($r = 0.99$). The coefficient of repeatability was 1.45 in T1 and 1.18 in T2. **Conclusions** The REALISE score may play an important role in the assessment and management of AF for grading their severity and comparing results of different treatments in future studies.

STEPPED-WEDGE RANDOMIZED CONTROLLED TRIAL OF LAPAROSCOPIC VENTRAL MESH RECTOPEXY IN ADULTS WITH CHRONIC CONSTIPATION

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Background Effectiveness of laparoscopic ventral mesh rectopexy (LVMR) in patients with defecatory disorders secondary to internal rectal prolapse (IRP) is poorly evidenced. A UK-based multicentre randomized controlled trial (RCT) was designed to determine the clinical efficacy of LVMR compared to controls at medium-term

follow-up. **Methods** A stepped-wedge RCT design permitted observer-masked data comparisons between patients awaiting LVMR with those who had undergone surgery. Adult participants with radiologically confirmed IRP refractory to conservative treatment were randomized to 3 arms with different delays before surgery. Efficacy outcome data were collected every 12 weeks up to 72 weeks. Clinical efficacy of LVMR compared to controls was measured as a 1.0-point reduction in PAC-QOL and PAC-SYM scores at 24 weeks. Secondary outcome measures included 14-day diary data, GAD7, PHQ9, St. Marks incontinence score, PISQ12, CC-BRQ, and BIPQ. **Results** Of 42 eligible patients, 28(67%) females were randomized from 6 institutions. Nine were assigned to the T0 arm, 10 to T12, and 9 to T24. There were no substantial differences in baseline characteristics between the 3 arms. Compared to baseline, significant reduction in PAC-QOL and PAC-SYM scores were observed at 24 weeks post-surgery (-1.09 [95% CI $-1.76, -0.41$], $P = 0.0019$, and -0.92 [$-1.52, -0.32$], $P = 0.0029$). As opposed to PAC-QOL (-1.38 [$-2.94, 0.19$], $P = 0.0840$ at 72 weeks), improvements in PAC-SYM scores persisted to 72 weeks (-1.51 [$-2.87, -0.16$], $P = 0.0289$). Compared to baseline, no differences were found on secondary outcomes, except for significant improvements on CCBRQ and BIPQ at 24 & 48 weeks. **Conclusions** There was evidence of a short-term effect of LVMR for IRP up to 36 weeks. Improvements in quality of life declined over follow-up up to 72 weeks.

A SIMPLE SCORE FOR PRIORITIZATION OF PROCTOLOGIC SURGERY AFTER LOCK-DOWN

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Background COVID-19 pandemic shows a critical impact on surgical procedures all over the world. Italy faced a deep impact and elective operations, screening and follow-up visits have been suspended since March 2020. An observational study was carried out in the Surgical Coloproctology Unit of the Val Vibrata Hospital, on 152 patients awaiting a proctological surgical treatment in that period. **Methods** To monitor the health status of the patients and re-schedule post-lockdown surgery, patients (84 males [55.3%] and 68 females [44.7%], mean age 53 years) were interviewed by telephone submitting a questionnaire developed by a senior clinician. Consequently a severity index for hemorrhoidal disease (HD), anal fissure (AF), anal sepsis was calculated, classifying the patients according to the score. 31%, 28% and 14% of the patients had, respectively, AS, HD or anal abscess/fistula. **Results** One hundred thirty-eight patients were included in the study and were divided into three classes: Priority Surgery (PS) with 47 patients [34%; 95% CI 26–42%], Deferrable Surgery (DS) with 25 patients [18%; 95% CI 12–25%], Long-term Surgery (L-TS) with 66 patients [48%; 95% CI 40–57%]. There was a significant correlation between perceived health status and Severity Index (Spearman $\rho = 0.97$, $p < 0.001$). Differences in age and sex were not significant (F test = 0.43; $p = 0.653$, chi2 test = 0.693; $p = 0.707$). 47 patients in class PS needed a prompt surgical treatment, while 24 patients in class DS and 65 patients in class L-TS waiting for a new programme. **Conclusions** New tools like this simple score can be useful for prioritization patients on the waiting list for surgical coloproctology after lockdown, limiting visit and hospital access.

LAPAROSCOPIC HARTMANN REVERSAL: FIRST EXPERIENCE TO REACH SYSTEMATIC APPLICATION IN A DISTRICT HOSPITAL

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Background Hartmann reversal (HR) is a complex procedure burdened by low mortality but high morbidity (up to 45%); although it is technically challenging it carries good short and long-term results. **Methods** A 51-years-old female affected by psychotic disorder underwent open Hartmann's procedure for Hinchey 4 perforated diverticular disease in December 2019. Laparoscopic reversal was performed 11 months later. The patient was placed in lithotomy position. An incision was made around the colostomy and the bowel was freed from subcutaneous and fascial adhesions. The anvil was then positioned in the colon which was then returned to the abdomen. Pneumoperitoneum was performed using an appropriate wound retractor/protector (Alexis®); the retractor was inserted in the colostomy site to allow the exploration of the abdomen. Three more trocars were inserted in the supraumbilical (10 mm), right iliac fossa (12 mm) and right flank (5 mm) position. The rectal stump was identified and a transanal Knight-Griffen anastomosis was performed. **Results** The duration of the intervention was 135 min. There were no intraoperative complications. The post-operative recovery was uneventful and the patient was discharged on day 3 post-surgery. **Conclusions** Laparoscopic Hartmann reversal is a challenging procedure and it is not always suitable. Therefore a meticulous selection of the patients is mandatory. The creation of a standardized technique is essential to perform a safe and successful procedure in order to offer a mini invasive approach to as many patients as possible.

AN EXCEPTIONAL CASE OF RIGHT ILIAC MUSCLE HERNIA CONTAINING A COLONIC DIVERTICULUM

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Background Iliac muscles hernias are a rare findings with only a few cases reported in literature. They are often related to previous trauma of lower back. **Methods** A 52-year-old female, without medical history or previous trauma, presented to the emergency department for abdominal pain in the right iliac fossa irradiated to the lower back and fever. Physical examination revealed McBurney point tenderness, while blood tests showed increased levels of white blood cells ($10.88 \times 10^3/\mu\text{L}$) and C-reactive protein (35 mg/L). An abdominal computed tomography was performed, showing colonic diverticulosis, presence of a coprolyte and a small collection close to the caecum, inflammation of pericaecal adipose tissue with extension to the right iliac muscle. **Results** In the suspect of acute appendicitis, the patient underwent laparoscopic abdominal exploration, that revealed no signs of acute appendicitis, but the presence of a right iliac muscle hernia containing a diverticulum of the ascending colon. The diverticulum was perforated, without evidence of abscess; it was isolated from the hernia and a tangential resection of the colon with mechanical stapler was performed. Postoperative course was uneventful and histology confirmed a perforated colonic diverticulum. **Conclusions** Iliac muscle hernia containing a right colonic diverticulum has never been described before and it should be taken in consideration in the differential diagnosis of right lower quadrant abdominal pain.

COMBINED SURGERY AFTER LIVER-FIRST APPROACH TO COLORECTAL LIVER METASTASIS

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Background About a third of colorectal cancer patients will experience liver metastasis during their disease course and in 15–25% of cases these are synchronous liver metastasis at the time of diagnosis. Several management options have been proposed without a clear consensus: a liver-first approach could be preferred if colorectal liver metastasis represent the main risk factor for patients' survival whereas a bowel-first one could be adopted in case of symptomatic disease such as massive bleeding or bowel obstruction. On the other hand, a combined approach allows a time-sparing strategy due to the absence chemotherapy interruptions between surgeries. **Methods** We performed a laparoscopic right hemicolectomy with complete mesocolic excision in a 55-year-old woman diagnosed with colorectal cancer and synchronous liver metastasis, after a liver-first approach. In particular, following two chemotherapy cycles (FOLFOXIRI + BEVACIZUMAB and FUFA + BEVACIZUMAB), she underwent a laparoscopic right hepatectomy and III segment thermoablations. During the follow-up, the appearance of other liver metastasis was highlighted which is why the MDT indicated a combined liver-colon surgery. The first step of the surgical plan was a hepatic de-rotation plus thermoablations followed by the right hemicolectomy. Two surgical teams of the same institution were involved. **Results** The post-operative course was characterized by a modest ascitic decompression which required medical treatment. The patient was then discharged in good general conditions. **Conclusions** The video shows the main steps of a laparoscopic right hemicolectomy.

THE IMPORTANCE OF BEING TUTORED: A YOUNG SURGEON LAPAROSCOPIC VENTRAL RECTOPEXY

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Background Laparoscopic ventral mesh rectopexy (LVMR) is well accepted for the treatment of complete rectal prolapse (CRP) and it is associated with low recurrence rate. However, due to its technical complexity, it is burdened by a conspicuous learning curve. **Methods** A 67-years-old male affected by CRP presenting with urgency and soiling was deemed suitable for LVMR; a full colonoscopy was performed prior to surgery. A young surgeon still completing its learning curve established the indication, an expert surgeon (> 10 years of experience) was required to supervise its surgical proficiency and competence path. The intervention was performed using the standard technique described by D'Hoore et al. in 2006. A titanized polypropylene mesh was used. The mesh was secured to the rectum using non absorbable suture and to the sacral promontory using Capsure clips. **Results** The duration of the intervention was 155 min. There were no intra-operative complications. The patient was discharged on day 2 post-surgery; the subsequent 3 months follow-up showed a gradual improvement in quality of life with regular bowel movements and without minor or major incontinence. **Conclusions** Laparoscopic ventral mesh rectopexy is technically demanding but it can be safely and successfully performed with good functional outcomes by a young surgeon if provided with the direct supervision of an expert colorectal surgeon.

POSTERS

THE IMPACT OF COVID-19 ON THE ONCOLOGIC OUTCOMES OF 3236 PATIENTS UNDERGOING COLORECTAL CANCER SURGERY IN NORTHERN ITALY IN 2019 AND 2020: RESULTS OF A MULTICENTRIC COMPARATIVE COHORT STUDY.

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Background This study compared patients undergoing colorectal cancer surgery in 20 hospitals of Northern Italy in 2019 versus 2020, in order to evaluate whether COVID-19-related delays in the execution of colorectal cancer screening resulted in more advanced cancers at diagnosis and worse clinical outcomes. **Methods** Retrospective multicentric cohort analysis of patients undergoing colorectal cancer surgery in March–December 2019 (2019) versus March–December 2020 (2020). Independent predictors of disease stage (oncologic stage, associated symptoms, clinical T4 stage, metastasis) and outcome (surgical complications, palliative surgery, 30-day death) were evaluated using logistic regression. **Results** The sample consisted of 1755 patients operated in 2019, and 1481 in 2020 (both mean ages 69.6 years). The proportions of cancers with symptoms, clinical T4 stage, liver and lung metastases in 2019 and 2020 were, respectively: 80.8% vs 84.5%; 6.2% vs 8.7%; 10.2% vs 10.3%; and 3.0% vs 4.4%. The proportions of surgical complications, palliative surgery, and

death in 2019 and 2020 were, respectively: 34.4% vs 31.9%; 5.0% vs 7.5%; and 1.7% vs 2.4%. At multivariate analysis, cancers in 2020 (vs 2019) were significantly more likely to be symptomatic (Odds Ratio—OR 1.36, 95% Confidence Interval—CI 1.09–1.69), in clinical T4 stage (OR 1.38; 1.03–1.85), with multiple liver metastases (OR 2.21; 1.24–3.94), but less likely to cause surgical complications (OR 0.79; 0.68–0.93). **Conclusions** Colorectal cancer patients who had surgery between March and December 2020 had an increased risk of more advanced disease in terms of associated symptoms, cancer location, clinical T4 stage, and number of liver metastases.

LONG-TERM OUTCOMES OF COMPLETE RESPONDERS AFTER NEOADJUVANT CHEMORADIOTHERAPY FOR LOCALLY ADVANCE RECTAL CANCERS

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Background The aim of the study was to investigate the disease-free (DFS) and overall survival (OS) in patients who had complete response after neoadjuvant chemoradiotherapy (NCRT) for locally advanced rectal cancers (LARC). **Methods** The study was conducted at Darent Valley Hospital between the period of August 2008–August 2020. All patients with either complete clinical and pathological response were included. Comprehensive data on peri-treatment response was collected. **Results** A total of 30 participants (median age 67 (IQR = 60–75), M:F 3:2) were included. Baseline staging was T3N2M0, CRM was positive in 66.7%, median tumour length was 42 mm (IQR 35–70 mm) and the median distance from anal verge was 50 mm (IQR 40–100 mm); 87% were moderately differentiated adenocarcinoma. The median follow-up was 42 months. The total of 27(90%) patients had cCR and opted for wait-and-see approach. About 11(36.7%) participants with cCR developed local (26.7%) and distant (10%) recurrence in a median time-period of 9 months (IQR 3–15). About 8(29.6%) underwent successful salvage surgery. The median post-operative staging after salvage surgery was ypT0, N0, MO, R0. A total of 3(10%) participants had NCRT followed by surgical resection and showed pCR. None of the participant with pCR developed recurrence or died from rectal cancer. The 5-year DFS and OS for all participants was 53.4% (SE ± 11.4%) and 95.7% (SE ± 4.3), respectively. The median The 5-year DFS and OS for participants with CCR was 51.1% (SE ± 11.4%) and 95.2% (SE ± 4.6), respectively. **Conclusions** A complete response confers a good prognosis. Complete responders can be managed without surgery under a stringent follow-up protocol.

TELE-PREHABILITATION FOR COLORECTAL CANCER PATIENTS DURING PANDEMIC RESTRICTIONS. PRELIMINARY RESULTS FROM A TERTIARY REFERRAL CENTRE

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Background Prehabilitation is a promising component of pre-operative surgical pathway. Optimizing psycho-physical conditions before the surgical act to enhance post-operative recovery could potentially be as important as post-operative rehabilitation, especially in frail patients. **Methods** Since January 2020, we introduced a multimodal prehabilitation scheme for colorectal cancer patients. Candidates are patients older than 65 years or with low functional reserve. The

program relies on four components: physiotherapy; dietetics; psychological support and preoperative blood management. Twice-a-week hospital sessions are organized by specialists during the preoperative 3–4 weeks period. COVID pandemia moved prehabilitation from standard approach to telemedicine one. The key point is represented by twice-a-week video-calls, realized through a dedicated network program with cooperation of caregivers. **Results** Overall, 18 patients followed the prehabilitation program, 8 of which in telemedicine modality. Median age was 79.5 and male/female ratio 11/7. Median baseline 5-item mFI was 1 (0–3). All patients completed the program without adverse events. Eight patients (44%) increased functional reserve with increased 6MWT > 20 m. Anxiety and depression levels decreased in 12/18 and 7/18 patients, respectively. Compliance rate was 94.7%. One patient underwent reoperation for surgical complication and another patient developed post-operative delirium. No cardiovascular or pulmonary complications were registered. Median hospital stay was 4.5 days. **Conclusions** Despite the small patients number does not consent solid conclusions, our preliminary experience demonstrates that prehabilitation is feasible and highly appreciated by patients. Telemedicine represents a valid example of rearrangement of patient-care modality after the Covid outbreak and an opportunity for other surgical contests.

PROTECTIVE STOMA AFTER LOW ANTERIOR RESECTION FOR EXTRAPERITONEAL RECTAL CANCER: COULD IT BECOME A DEFINITIVE CHOICE IN DISGUISE?

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Background Colorectal/coloanal anastomosis after LAR with TME are often covered by a temporary stoma to mitigate the potential severe effects of an anastomotic leak. Usually, the defunctioning stoma is closed after 1 to 6 months. In literature, data are inconsistent concerning the risk of failure to achieve stoma closure in the long-term. **Methods** A consecutive cohort of patients submitted to radical surgery for extraperitoneal rectal cancer from July 2002 to July 2020 in two colorectal units was retrospectively analysed. Incidence of protective stoma non-closure in the long-term period and predictive factors were assessed. Student's t test for continuous variables and chi-square test with Yates' correction for categorical variables were performed. **Results** Three-hundred-six patients underwent surgery for resectable mid-inferior rectal cancer. Restorative surgery was performed in 241 cases, 220 of which with protective stoma. At a mean follow-up of 71.9 months, 32 pts (14.5%) did not have their stoma closed. Factors associated with non-closure were age ($p < 0.01$), a scheduled longer time to closure ($p < 0.001$) and tumour's stage (yTNM) ($p < 0.05$). Gender, neoadjuvant therapy, ASA score, anastomotic configuration and complication did not show any significant differences between the groups. **Conclusions** Risk of failure to have stoma closure after LAR is not negligible occurring in roughly one seventh of patients. Metastatic disease, preoperative chemoradiotherapy, anastomotic leak and comorbidity were previously reported as more common risk-factors. In our series only age, a protocol longer interval to closure and cancer stage are significantly related with long-life stoma.

LONG-TERM RESULTS OF WIDE SURGICAL RESECTION FOR BUSCHKE-LOWENSTEIN TUMORS ON A COHORT OF 25 PATIENTS

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Background Buschke-Lowenstein Tumor (BLT) is a rare entity caused by HPV infection and involving the anal region, perineum and often genitalia. These lesions present high rate of recurrence (> 60%) and may degenerate. **Methods** Twenty-five patients underwent wide local excision of BLT between January 1, 2004 and April 30, 2021 at our Institution. Data on patient characteristics at baseline, post-operative results and follow-up were prospectively collected. **Results** Twenty-one patients were male (44% homosexuals) and median age was 40 years (19–76). Median duration of symptoms and number of partners were 5 months (1–36) and 23 (5–100), respectively. Eight (32%) patients had been previously treated for condylomata acuminata. Six (24%) patients were HIV-positive and 2 (33%) of them had CD4 + levels < 200 μ L at diagnosis. With a median follow-up of 136 months (3–213), recurrence occurred in 7 (28%) patients. Median number of recurrences for each patient was 3 (2–5). Squamous carcinoma and AIN I were found at pathological examination in 2 (8%) and 1 (4%) case, respectively. One (4%) patient developed AIN I after surgery. Four (16%) patients died during follow-up: one for a squamous carcinoma developed after surgery, the other 3 for medical causes. A significant association was found between HIV + and risk of malignant transformation at chi-square test ($p = 0.009$). **Conclusions** Wide local excision is a safe and effective treatment for BLT. Plastic reconstruction is not indicated in most of cases. Chemo-radiotherapy is indicated only in malignancies. HIV infection may represent a risk for malignant degeneration.

FACTORS INFLUENCING THE ONSET OF A “LOW ANTERIOR RESECTION SYNDROME” IN PATIENTS UNDERGOING RESTORATIVE PROCTOCOLECTOMY FOR ULCERATIVE COLITIS

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Background “Low anterior resection syndrome” (LARS) occurs in a high percentage of patients after low rectal resection. The aim of the study was to evaluate the presence of LARS in patients undergoing restorative surgery for Ulcerative Colitis (UC) using the LARS score. We also evaluated whether there was a correlation between the presence of LARS and some peri / postoperative factors. **Methods** We considered 44 patients who underwent the restorative proctocolectomy with IPAA in a J-pouch configuration for ulcerative colitis (UC) requiring surgery. All patients had completed the surgical procedures for at least 6 months. All patients completed the LARS questionnaire and were divided into affected and unaffected patients. We therefore evaluated if there was a correlation between the presence of LARS and many perioperative factors. **Results** Of 44 patients undergoing restorative surgery, 28 did not develop LARS and 16 developed LARS (36%). Comparing multiple perioperative factors, the two factors related to the development of LARS were: the time elapsed between the creation of the pouch and the closure of the ileostomy ($p = 0.001$) and the onset of pouchitis even not significant ($p = 0.07$). The mean interval was 8.84 (range 3–26 months) and the

analysis of the roc curve showed that 6.5 months is the threshold value beyond which the risk of LARS increases. **Conclusions** The functional outcomes of ulcerative colitis surgery are still poorly studied. Furthermore, this study showed that the late closure of the ileostomy represents a predisposing factor for the onset of LARS, especially if over 6.5 months.

SURGICAL RECURRENCE IN CROHN COLITIS

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Background Patients with colonic Crohn's Disease have a high probability of surgical recurrence after primary surgery. There is no consensus about factors that may favour surgical relapse. The aim of the study was to assess the rate of surgical recurrence after surgery for Crohn's Disease with primary colonic disease. Secondary endpoint was to evaluate variables that are significantly related to the relapse. **Methods** From January 2011 to December 2020, at the General and Oncological Surgery Department Mauriziano Umberto I Hospital of Turin, 382 patients underwent surgical treatment for Crohn's Disease. Of those, 41 underwent colonic resection for primary Crohn's disease. Patients' characteristics, age of diagnosis, therapy, familiarity, extraintestinal disease, extension of colectomy and type of anastomosis were analysed. **Results** With a median follow-up of 5 years, the observed surgical recurrence rate was 26.8%. The variables related to surgical recurrence, even if not significant, were familiarity and the presence of extra-colonic disease ($p = 0.1$ and 0.11). The use of postoperative steroids and previous subtotal colectomy were found to be protective against relapse ($p = 0.06$ and 0.08). **Conclusions** The analysis of our data highlights that there are no statistically significant factors influencing surgical recurrence. Whilst not statistically significant, the use of postoperative steroids and subtotal colectomy could be protective, while familiarity and presence of extra-colic disease leads to a higher rate of re-intervention. Segmental colectomy for single location disease, with a low rate of surgical recurrence, should be considered as the indication of choice to improve patient quality of life.

POST-OPERATIVE MORBIDITY IN CROHN'S DISEASE: WHAT'S THE IMPACT OF PATIENT, DISEASE AND SURGICAL RELATED FACTORS?

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Background More than a half of patients suffering from Crohn's disease requires surgery in their lifetime. However, predictors of post-operative morbidity and mortality are poorly investigated. We aimed to assess the predictors of post-operative mortality/morbidity in Crohn's disease through a retrospective cohort study. **Methods** Crohn's disease patients followed-up and operated at our tertiary IBD Centre from 2014 to 2019 were enrolled. For each patient, we evaluated patient-dependent (comorbidities, smoking, drugs, nutritional status), disease-dependent (disease duration/location/behaviour/extension), surgery-dependent variables (duration, emergency/election, laparoscopy/laparotomy, bowel/colic resection, length of intestinal resection). **Results** 165 subjects were operated (males 54.5%, mean age 39.05 ± 15.9). Forty-two (25.5%) developed post-operative

complications (major complication rate = 9.8%). Post-operative complications were: wound infection (12.1%), respiratory complications (4.8%), prolonged ileum (4.2%), anastomotic leak (3.6%), urinary infections (3%), abdominal abscess (2.4%), anastomotic bleeding (3.6%), other infections (3%), abdominal bleeding (1.2%), obstruction (0.6%). Two subjects (1.2%) required re-operation within 30 days and one died. A surgery-duration < 141 min was predictive for a better post-operative outcome (sensitivity 80.9%, specificity 43.1%, PPV 32.7%, NPV 86.9%). At multivariable analysis, stricture/fistulizing behaviour (OR 3.7, 95% CI 1.6–6.4, $p = 0.02$), need for total parenteral nutrition (OR 4.1, 95% CI 2.4–9.2, $p = 0.01$), pre-operative bowel cleansing (OR 0.6, 95% CI 0.41–0.83, $p = 0.01$), surgery duration < 141 min (OR 0.2, 95% CI 0.08–0.7, $p = 0.03$), were the only factors associated with post-operative morbidities. **Conclusions** About a quarter of Crohn's disease patients develops post-operative complications. Several patient-related, disease-related and surgery-related factors are predictive for post-operative morbidity. The recognition of these factors, the multidisciplinary approach, and intensive preoperative management could minimize these complications.

THE IMPACT OF COVID-19 PANDEMIC ON IBD SURGERY: A SINGLE CENTER EXPERIENCE.

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Background The spread of COVID-19 pandemic forced the national health care system to reorganize the services to maintain an adequate therapeutic offer. Surgical procedures were progressively reduced to provide bed and personnel for COVID-19. The aim of our study was to retrospectively analyze the effect of one year of COVID-19 pandemic on Inflammatory Bowel Disease (IBD) surgery in a cohort of consecutive patients and evaluate post-operative short-term complications. **Methods** We retrospectively analyzed the records two cohorts of IBD patients who were referred for IBD related resective surgery respectively during 2019 and 2020. **Results** A total of 160 patients were included in the study. Median age was 44 (range 15–77). Patients were referred for Ulcerative colitis (23.1%), Crohn's disease (76.9%). Eighty-three patients underwent surgery during 2020, this represents a 4.6% increase compared to the same period of 2019. Median post-operative hospital stay increased (7 days in 2019 vs 6 days in 2020). Laparoscopic was the most used procedure in both periods (49% in 2019 and 59% in 2020). Complication rates reported as Clavien–Dindo score 3 or 4 slightly decreased in 2020 (6.5 in 2019, 4.8 in 2020). PCR test for detection of COVID-19 infection was conducted in all these patients before the hospitalization. 2 Patients out of 70 were tested positive for COVID-19 and their surgeries were rescheduled. **Conclusions** There was no significant reduction in IBD resective surgery, neither a worsening of the outcomes. This result was achieved reducing small surgeries elective procedures and providing protective measures for both patients and healthcare workers.

INFLAMMATORY BOWEL DISEASE PATIENTS REQUIRING SURGERY CAN BE TREATED IN REFERRAL CENTRES REGARDLESS OF THE COVID-19 STATUS OF THE HOSPITAL: RESULTS OF A MULTICENTRIC EUROPEAN STUDY DURING THE FIRST COVID-19 OUTBREAK (COVIBD-SURG)

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Background Outcomes of inflammatory bowel disease (IBD) patients requiring surgery during the outbreak of Coronavirus disease 19 (COVID-19) are unknown. The aim of this study was to analyse the outcomes depending on the COVID-19-status of the centre. **Methods** Patients undergoing surgery in six COVID-19-treatment and one COVID-free hospitals (5 countries) during the first COVID-19 peak were included. Variables associated with risk of moderate-to-severe complications were identified using logistic regression analysis. **Results** Of 91 patients with Crohn’s disease (54, 59.3%) or ulcerative colitis (37, 40.7%), 66 (72.5%) had surgery in a COVID-19-treatment hospital, while 25 (27.5%) in the COVID-19-free centre. More COVID-19-treatment patients required urgent surgery (48.4% vs. 24%, $p = 0.035$), did not discontinue biologic therapy (15.1% vs. 0%, $p = 0.039$), underwent surgery without a SARS-CoV-2 test (19.7% vs. 0%, $p = 0.0033$), and required intensive care admission (10.6% vs. 0%, $p = 0.032$). Three patients (4.6%) had a SARS-CoV-2 infection postoperatively. Postoperative complications were associated with the use of steroids at surgery (Odds ratio [OR] = 4.10, 95% CI 1.14–15.3, $p = 0.03$), presence of comorbidities (OR = 3.33, 95% CI 1.08–11, $p = 0.035$), and Crohn’s disease (vs. ulcerative colitis, OR = 3.82, 95% CI 1.14–15.4, $p = 0.028$). **Conclusions** IBD patients can undergo surgery regardless of the COVID-19-status of the referral centre. The risk of SARS-CoV-2 infection should be taken into account.

LHP (LASER HAEMORRHOIDOPLASTY) AS A PRIMARY TREATMENT FOR SYMPTOMATIC HAEMORRHOIDAL DISEASE

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Background We explored laser haemorrhoidoplasty (LHP) as a method of reducing arterial inflow to the haemorrhoidal vascular plexii with or without mucopexy for the primary treatment of symptomatic haemorrhoidal disease. **Methods** Data was collected retrospectively for patients undergoing LHP (\pm mucopexy) in our unit from August 2017 to June 2019. LHP (Pulsed 1470 nm, Leonardo laser, Biolitec) is the application of laser energy selectively into the haemorrhoidal subplexal plane for those with symptomatic grade II/III/IV haemorrhoids. Accompanying prolapsing cushions were treated with a mucopexy. **Results** Of 153 patients analysed [median age 46 years, IQR 36–55, 74 males], symptoms consisted of: 131 bleeding (85.6%), 56 pain (36.6%), 46 prolapse (30.1%), 13 soiling/discharge (8.5%) and 8 pruritis (5.2%). 36 patients had both bleeding and prolapse (23.5%). 57.5% of patients had at least one cushion recorded as 3rd or 4th degree on Goligher’s classification. 61% of patients had mucopexy. 118 (77.1%) patients had no recurrent symptoms at median follow-up of 112 days (IQR 50–183). 35 patients had recurrent symptoms (22.9%); the most significant being prolapse (9) or prolapse and pain (4). 17 patients required further procedure for haemorrhoids (8 repeat LHP, 1 ligation, 6 open haemorrhoidectomy, 1 Rafaelo, and 1 THD). 13 (8.5%) patients had complications; the most common were: fissures in five (3.3%); three (2%) had pain that required re-exploration, two (1.3%) developed abscesses requiring drainage; and one developed a fistula that required surgery. **Conclusions** LHP is a reproducible, non-destructive technique with an acceptable complication profile that reduces with experience.

INITIAL EXPERIENCE OF USING RAFAELO® TECHNIQUE FOR SYMPTOMATIC HAEMORRHOIDS IN A DISTRICT GENERAL HOSPITAL

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Background Ambulatory techniques for haemorrhoidal disease are being increasingly explored. We have reserved radiofrequency ablation (Rafaelo®) for patients who have symptomatic bleeding haemorrhoids that can be all eventually treated in an ambulatory manner without general anaesthetic (GA). **Methods** Data was collected retrospectively for patients undergoing the Rafaelo® procedure from June 2018 to June 2019 in our unit. Though initially patients had the technique under GA to gain familiarity with the technique (the first 9 cases studied), patients were eventually treated in the left lateral position and submucosal injection of lidocaine \pm sedation (midazolam) was used prior to application of energy. **Results** Thirty-six consecutive patients were studied, of which 10 were excluded (three had other co-existing pathology, one required an open haemorrhoidectomy, and seven were lost to long-term follow up). Thus, 26 patients [median age 46.5, IQR 38–61; 18 males] were included. Primary symptoms noted bleeding (96%), prolapse (19.2%), pain (19.2%), itching (7.6%), and soiling/discharge (7.6%). At a median follow-up of 119 days [IQR 89–187], 19 of 26 (73%) had resolution of symptoms. 7 (27%) cases had recurrent symptoms. Four (15.4%) required further procedure for haemorrhoids with complete symptom resolution [two had laser haemorrhoidoplasty, one underwent open haemorrhoidectomy, one had repeat Rafaelo®]. Four patients experienced complications (15.4%): Prostatitis (1), Fissure-in-ano (2), mucosal stenosis (1). **Conclusions** In selected cases the Rafaelo® procedure is an effective technique and has an acceptable complication profile. It is particularly appealing to patients as it is ambulatory, and does not require a general anaesthetic.

ENHANCED RECOVERY AFTER PROCTOLOGIC SURGERY—ERAPS: AN ITALIAN PROJECT

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Background ERAS programs have shown great results in several surgical fields. The aim of this project is to explore the efficacy of an ERAS program tailored on proctologic surgery and in particular on Hemorrhoids surgery. The first goal is the reduction of 30-day morbidity then post-operative pain, hospital stay and recurrence rate. **Methods** An Italian prospective multicentric study will be conducted from 2022 involving all Italian Proctologists. The 5 fundamental pillars of ERAS protocols will be considered (nutrition and preoperative management, minimally invasive approach, early mobilization, pain control, healing promotion) and customized for Hemorrhoids surgery. Data collection will be supported by the use of a dedicated digital application [PROCTO-NOTE (Medical-Note Srl, Pontedera-Pisa-Italy)]. **Results** Concerning nutrition and pre-operative management we will focus on 4 areas of action as follows: pre-operative nutrition, soft stools, the reduction and control of the flogosis of the mucosa and the reinforcement of vascular tone and microbiota implementation. Minimally invasive approach: we focused on the impact of the use of small instruments and anaesthesiological timing, in order to prevent post-operative pain, and on a “tailored” surgical strategy. Early mobilization was achieved by the use of local anesthesia associated with a tailored surgical strategy. Post-operative pain control was improved through both preoperative pain management and synergy between local anesthesia and tailored surgery as well as search for an effective and low side effects analgesic strategy. Promotion of healing: administration of anti-inflammatory, healing and local creams. **Conclusions** Hemorrhoids surgery outcomes must be improved. ERAPS project offers us a real opportunity for change, growth and sharing a new way of approaching proctologic surgery.

SAFETY AND EFFECTIVENESS OF TAILORED HAEMORRHOIDECTOMY IN OUTPATIENTS SETTING

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Background Single or double prolapsed pile instead of full mucohaemorrhoidal prolapse is a common finding in patients with symptomatic III-IV degree haemorrhoids. For this selected group of patients, symptoms relief could be achieved by managing the single/double prolapsed piles. The aim of this study was to evaluate the safety and medium-long term effectiveness of outpatient tailored Milligan-Morgan haemorrhoidectomy under local anaesthesia. **Methods** Clinical records of 202 patients submitted to outpatient tailored MMH, under local anaesthesia and without anal dilation, treated between 2013 and 2020, were retrospectively reviewed. Post-operative pain score, need of painkillers, complications and symptoms recurrence, return to working activities and patient grading assessment scale were recorded. **Results** One-hundred fifty-two and 15 patients underwent a single and double-pile haemorrhoidectomy respectively. With regard to postoperative outcomes, VAS decreased from a median value of 4 (IQR 2–6) the day of surgery to 1 (IQR 0–4) on the 10th postoperative day ($p < 0.001$). Sixty-one patients needed painkillers during the first week after surgery. There was no mortality or major complication. No urinary retention, anal incontinence or stricture occurred. During the median follow-up of 39 (IQR 12–60) months, 26 patients reported symptoms recurrence but only six

underwent traditional MMH. Recovery to normal activity occurred within a median period of 6 days and the Clinical Patient Grading Assessment Scale at 1 year after surgery was reported as “good deal better”. **Conclusions** Tailored MMH performed under local anaesthesia in ambulatory setting can be considered a safe and effective technique with high patients’ compliance and satisfaction.

ENDOLUMINAL TREATMENT OF HAEMORRHOIDS WITH FOAM (ENDOTHEF)

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Background The present abstract describes our experience using intraluminal injection of sclerosing foam in the treatment of bleeding haemorrhoids. **Methods** The patient lies in the left lateral position, without any anesthesia or sedation. With a 10 mm flexible endoscopic instrument we injected in each haemorrhoid 2 ml of foam using a 23G endoscopic needle, up to a maximum of 8 ml. Foam is prepared according to Tessari’s method connecting two syringes through a three-way valve, one containing gas (air, CO₂) and the other with the sclerosing agent (Polidocanol 3%), with a 4:1 gas/liquid ratio. **Results** From May 2008 to March 2021 we enrolled 479 patients with II- and III-degree bleeding haemorrhoids. All the patients were observed every three weeks for the first three months and then as needed. Every patient received an average of 2.7 treatments. In 13 cases we have carried out over than five sessions for persistent bleeding. 16 patients treated with secondary severe iron deficiency anemia (HGB < 7 mg/dL) had a normalization of hematocrit within a month after the first session of sclerosis. In 83% of cases, proctorrhagia disappeared at the end of the scheduled treatment. We encountered rectal micro-perforation in 2 patients and prostatitis in 12 patients. All of them were successfully healed with non-surgical treatment. **Conclusions** Foam sclerotherapy should be considered a useful tool for the management of haemorrhoids in order to achieve good control of bleeding with a limited number of complications

MINIMALLY INVASIVE TREATMENT OF PILONIDAL DISEASE WITH EPSiT (ENDOSCOPIC PILONIDAL SINUS TREATMENT): LONG-TERM RESULTS

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Background Numerous treatments for pilonidal sinus are available but there is still debate about which one is the most effective. The aim of this study was to evaluate the 5-year surgical outcomes of a case-series treated with endoscopic pilonidal sinus treatment (EPSiT). **Methods** We conducted a retrospective single-center analysis of all patients treated with EPSiT, by a single surgical team. The primary outcomes were recurrence, persistence and treatment failure. The secondary outcomes were painkiller use, postoperative pain, time off-work, satisfaction, complications, wound healing time, time to persistence or recurrence. **Results** Forty-two patients underwent 46 EPSiT procedures for primary (47.8%) or recurrent pilonidal disease (52.2%). All patients completed the follow-up (median 62) months. The single procedure healing rate was 76.1%. The healing rate for the first and second EPSiT procedure, when required, was 83.3%. Among the 46 EPSiT, we recorded 6 cases of persistence (13.0%) and 5 cases of recurrence (10.9%). A recent meta-analysis showed a 20.3% failure rate for excisional surgery. The median operative time was 32.5 min, the median pain score (VAS) was 2, and the median time off-work

was 4 days. Four patients (8.7%) experienced complications: serosanguinous (n = 2) or seropurulent discharge (n = 2). The satisfaction rate was 95.7%. **Conclusions** EPSiT shows a failure rate similar to that of excisional surgery. EPSiT is safe, well accepted and associated with a low level of post-operative pain, short hospitalization, short time off-work, as well as optimal cosmetic results. These findings suggest that this technique should be available to every surgeon.

AGEING WITH SACRAL NERVE STIMULATION FOR FECAL INCONTINENCE. WHO WILL GET BENEFIT AFTER MORE THAN 10 YEARS?*

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Background Sacral nerve stimulation (SNS) has represented a major advancement in the minimally invasive management of patients with fecal incontinence (FI). Although the success rate in the short-medium term has widely been demonstrated, the very long-term outcomes are poorly investigated. This study aims to assess the effectiveness of SNS in a cohort of patients with a follow-up longer than 10 years. **Methods** Clinical records of patients submitted to SNS for FI in our tertiary referral colorectal Unit between 1998 and 2010 were retrospectively reviewed looking for status of the implantable pulse-generator (IPG), follow-up duration, severity of FI by the St Marks' score and quality of life. **Results** 62 patients fulfilled the entry criteria and 36 (58%, median follow-up, 12 years) accepted to take part to the telephone interview, while 26 (42%) were lost to the follow-up. Nineteen patients had their IPG removed (Group A) while 17 (27%) had the SNS still active after a median follow-up of 13 years (Group B). In the group A, the median baseline St Marks' score was 13 and did not change after the IPG removal. In group B the median baseline St Marks' score was 14, at last IPG substitution it was of 7 and at the last follow-up dropped to 4. In the group A, the median SF-12 physical and mental scores did not change significantly while they improved significantly in group B. **Conclusions** A progressive deterioration of the success rate of SNS with the time has been documented after a very long-term follow-up.

TRANSANAL IRRIGATION FOR INCONTINENCE, FUNCTIONAL CONSTIPATION OR LARS: LONG-TERM EVIDENCE FROM A MULTICENTRIC STUDY

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Background To assess how transanal irrigation (TAI) modifies Quality of Life (QoL) and intestinal function of patients with functional constipation (FC), fecal incontinence (FI) and Low Anterior Resection Syndrome (LARS). **Methods** 16 Italian centers retrospectively analyzed data from 190 patients suffering from FC (n = 101), FI (n = 26) or LARS (n = 63) and treated with TAI between 1/2016 and 07/2021. The primary endpoints were VAS, Pac-QoL (FC), FI-QoL (FI) and SF-36 (LARS) scores while the secondary included Wexner and LARS score (LARS). Data normality was checked through Shapiro–Wilk test. Questionnaires scores at baseline and at 1-, 6-, 12- and 24-month follow-ups were compared using one-way ANOVA and post-hoc Bonferroni test for normal data, whereas nonparametric data were analyzed using Kruskal–Wallis ANOVA and post-hoc Dunn's test. The significance level was set at 0.05. **Results** After 1 month, VAS score increased significantly in all patients (p < 0.05 in all cases) and further improved over time. In FC patients, all subdomains of the PAC-QoL showed a significant improvement at 1 month (p < 0.05) with a stable score up to 24 months. FI-QoL questionnaire showed improving trend over time in FI patients, as well as SF-36 (LARS) where most of the subdomains had a significant difference at 6 months of follow-up. Both Wexner and LARS scores dropped significantly (p < 0.001) after 1 months in FC and LARS groups. **Conclusions** TAI in patients suffering from FC, FI or LARS demonstrated a significant improvement in QoL and functional scores at 1 month, with stable results up to 24 months.

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