



# Stapling Through a Bougie During Sleeve Gastrectomy in a Superobese Patient—a Video Vignette

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Received: 4 April 2020 / Revised: 9 June 2020 / Accepted: 15 June 2020 / Published online: 2 July 2020  
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## Abstract

**Purpose** Bariatric-metabolic surgery in superobese patients (BMI > 50 kg/m<sup>2</sup>) is very challenging indeed with little room for error. In many cases, a two-step procedure is required, since more complex primary bariatric procedures can be technically demanding and bearing a relevant risk for the patient. At our institution, laparoscopic sleeve gastrectomy (SG) is the preferred primary procedure, followed by a conversion to either SADI-S or Roux-en-Y gastric bypass (RYGB) after initial weight loss is achieved [1, 2]. This video aims at demonstrating the conversion from primary SG to RYGB due to an adverse event in a 45-year-old superobese female patient (weight, 170 kg; BMI, 73 kg/m<sup>2</sup>).

**Methods** An intraoperative laparoscopic video has been anonymized and edited to demonstrate the course of the operation on the patient mentioned above.

**Results** The start of the procedure was uneventful. After a successful mobilization of the greater curvature, the stomach was resected with an electronic stapling device guided by a firm 36-french bougie (Rüsch, Germany) towards the angle of His. Due to a limited view, a stapler was placed over the bougie, which resulted in the stomach being subtotally transected, the staples attaching the bougie to the sleeve about 5 cm from the gastroesophageal junction. Salvage surgery after removing the remnants of the bougie was a conversion to RYGB.

**Conclusion** When performing a bariatric-metabolic surgery in superobese patients, an extended skill level is required to provide a solution, should anything go wrong. Therefore, we suggest bariatric-metabolic surgery in superobese patients to be performed solely and specifically at high-volume centres.

**Keywords** Sleeve gastrectomy · RYGB · Video vignette · Bougie

## Introduction

Bariatric-metabolic surgery in superobese patients (BMI > 50 kg/m<sup>2</sup>) is very challenging indeed with little room for error. In many cases, a two-step procedure is required, since more complex primary bariatric procedures can be technically

demanding and bearing a relevant risk for the patient. At our institution, laparoscopic sleeve gastrectomy (SG) is the preferred primary procedure, followed by a conversion to either SADI-S or Roux-en-Y gastric bypass (RYGB) after initial weight loss is achieved [1, 2].

**Electronic supplementary material** The online version of this article (<https://doi.org/10.1007/s11695-020-04790-z>) contains supplementary material, which is available to authorized users.

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## Purpose

This video aims at demonstrating the conversion from primary SG to RYGB due to an adverse event in a 45-year-old superobese female patient (weight, 170 kg; BMI 73 kg/m<sup>2</sup>). In preparation, the patient received a dietary counselling and was able to lose 9 kg (EWL (excess weight loss), 8%; TWL (total weight loss), 5%) on a low-carbohydrate diet.

## Methods

An intraoperative laparoscopic video has been anonymized and edited to demonstrate the course of the operation on the patient mentioned above.

## Results

The start of the procedure was uneventful. After successful mobilization of the greater curvature, the stomach was resected with an electronic stapling device guided by a firm 36-french bougie (Rüsch, Germany) towards the angle of His. Due to a limited view, a stapler was placed over the bougie, which resulted in the stomach being subtotally transected, the staples attaching the bougie to the sleeve about 5 cm from the gastroesophageal junction. Salvage surgery after removing the remnants of the bougie was a conversion to RYGB. After surgery, the patient underwent an uneventful postoperative course.

## Discussion

The decision to change strategies intraoperatively was made for the following reasons. Suturing the defect was eliminated due to the risks of postoperative stenosis and early leaks. Thus, the decision was made to staple proximal to the area harmed. A conversion to RYGB was chosen based on the fact that RYGB is a low-pressure system (as opposed to SG) and is thus well suited to treat intra- and postoperative complications [3, 4]. Every bariatric patient should be informed preoperatively about a possible intraoperative conversion/change of strategy.

## Conclusion

When performing bariatric-metabolic surgery in superobese patients, an extended skill level is required to provide a solution, should anything go wrong. Therefore, we suggest bariatric-metabolic surgery in superobese patients to be performed solely and specifically at high-volume centres.

**Funding Information** Open access funding provided by Medical University of Vienna.

## Compliance with Ethical Standards

**Conflict of Interest** Christoph Bichler, Julia Jedamzik, Daniel M Felsenreich, Felix B Langer, Magdalena Eilenberg, Natalie Vock, Katharina Steinlechner, Jakob Eichelter, Lisa Gensthaler, and Gerhard Prager have no conflicts of interest or financial ties to disclose.

**Human and Animal Rights** The performed operation and its intraoperative change of strategy was in accordance with the ethical standards of the research committee of the Vienna Medical University and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

**Informed Consent** Written, informed consent was obtained from the individual participant included in this video.

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## References

1. Iannelli A, Debs T, Martini F, et al. Laparoscopic conversion of sleeve gastrectomy to Roux-en-Y gastric bypass: indications and preliminary results. *Surg Obes Relat Dis.* 2016;12(8):1533–8.
2. Balibrea JM, Vilallonga R, Hidalgo M, et al. Mid-term results and responsiveness predictors after two-step single-anastomosis duodeno-ileal bypass with sleeve gastrectomy. *Obes Surg.* 2017;27(5):1302–8.
3. Bellorin O, Lieb J, Szomstein S, et al. Laparoscopic conversion of sleeve gastrectomy to Roux-en-Y gastric bypass for acute gastric outlet obstruction after laparoscopic sleeve gastrectomy for morbid obesity. *Surg Obes Relat Dis.* 2010;6(5):566–8.
4. Saglam K, Aktas A, Gundogan E, et al. Management of acute sleeve gastrectomy leaks by conversion to Roux-en-Y gastric bypass: a small case series. *Obes Surg.* 2017;27(11):3061–3.

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