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MULTIMEDIA ARTICLE

What Every Bariatric Surgeon Should Know: How to Relieve Obstruction at the Jejuno-jejunostomy After Roux-en-Y Gastric Bypass

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Abstract

Introduction Roux-en-Y gastric bypass (RYGB) remains one of the key bariatric procedures worldwide. In addition to bleeding and anastomotic leak, there are rarely occurring complications such as obstruction at the jejuno-jejunostomy in the early postoperative phase.

Patient and Methods A 51-year-old lady (weight 122 kg; BMI 46 kg/m^2; with type 2 diabetes mellitus and hypertension) underwent RYGB in our tertiary referral centre 3 days prior to admission. She originally recovered well from the uneventful operation, but began vomiting on day 3. At this point, she complained of no other symptoms. An urgent CT scan identified a gastric remnant dilatation, and an obstructed jejuno-jejunostomy. An urgent laparoscopic exploration was performed, which identified obstruction at this level.

Results Within our video-presentation, detailed technical steps are described. First, gastric remnant decompression was performed by inserting a tube gastrostomy. Secondly, the obstruction was identified. Consequently, a new jejuno-jejunostomy was created, proximal to the original anastomosis, using a linear stapler, and direct suture closure of the enterotomy defects. After thorough washout, drains were placed in the pelvis and alongside the jejuno-jejunostomy. The patient was discharged home after a 2-week hospital stay which included 5 days of invasive ventilation on the ITU.

Conclusion A high-level of suspicion is required to suspect, diagnose and treat post-RYGB complications. A bariatric on-call rota with appropriately trained personnel is essential.

Keywords Complications · Roux-en-Y gastric bypass · Bariatric surgery · Jejuno-jejunostomy · Bowel obstruction

Introduction

Roux-en-Y gastric bypass (RYGB) remains one of the key procedures worldwide [1], despite other procedures (SAGB/OAGB, lap. sleeve gastrectomy (LSG)) being performed in increasing numbers.

The RYGB has stood the test of the time: it is durable, safe, has highly predictable long-term weight loss, and the effect on concomitant metabolic co-morbidities is significant [2]. However, in the short term, it does pose a slightly higher perioperative risk profile than the above mentioned other procedures.

With meticulous surgical technique, bleeding and anastomotic leak rates can be minimized; there are many published series available in the medical literature with thousands of cases being performed without a leak or post-operative bleed.

There are, however, other rarely occurring complications, which although have a very low incidence, should be within the remit of the on-call surgeon to remedy, as the associated morbidity and mortality is high.

One such complication is obstruction at the jejuno-jejunostomy [3–5]. It is difficult to recognize and treat laparoscopically; however, we demonstrate an example of how to deal with this challenging situation.

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Patient and Methods

A 51-year-old lady with multiple comorbidities (BMI 46 kg/m^2; weight 122 kg) was referred to our unit for bariatric surgery. Due to her type 2 diabetes, hypertension, and BMI, a RYGB was recommended, with appropriate pre-operative counselling. The procedure was completed laparoscopically, with minimal intra-operative blood loss, and an operating time of 75 min. Her recovery was uneventful but at 72 h she started vomiting. An urgent CT scan was requested which identified acute gastric dilatation, a dilated bilio-pancreatic limb, slightly dilated alimentary limb and collapsed common channel. Urgent surgical exploration was undertaken; initially the over-distended stomach was decompressed. Next, the moderately distended alimentary and massively distended bilio-pancreatic limb were identified. The collapsed common channel was re-anastomosed with the bilio-pancreatic-limb (re-fashioning of jejuno-jejunostomy) with a 60-mm EndoGIA (gold, 2–2.5–3 mm thick; Medtronic, Dublin, Ireland) linear stapler, and the jejunostomy defect was closed using a hand-sewn technique with 3–0 barbed PDS suture (V-lok, Medtronic, Dublin, Ireland). This video demonstrates the difficulties of the procedure which were mainly the limited intra-abdominal space, distended bowel loops and performing sutured jejuno-jejunostomy closure with bile spurting under pressure. Finally, a Foley catheter was inserted into the gastric remnant and left in situ for 6 weeks for decompression purposes.

Results

The patient required 5 days of invasive ventilation, due to her pre-existing respiratory impairment. There was no post-operative leak; gastrointestinal function returned to normal after 2 weeks in the hospital, and the patient was eventually discharged home.

Conclusion

Complications after bariatric surgery do occur, and the RYGB has the tendency to show slightly higher complication rates than the LSG or the SAGB. Bariatric centres must have the ability to be able to deal with common and uncommon emergency situations. A high-level of suspicion is required to suspect, diagnose and treat post-RYGB complications. A bariatric on-call rota with appropriately trained personnel is essential. Revision and re-fashioning of the jejuno-jejunostomy is an infrequent procedure, but requires highly trained personnel, appropriate technical setup and meticulous surgical technique.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent for the operation was obtained from the patient included in this paper.

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