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MULTIMEDIA ARTICLE

Laparoscopic Conversion of Gastric Plication to Roux-en-Y Gastric Bypass

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Abstract

Purpose Laparoscopic gastric plication (LGP) is a relative new bariatric procedure with a high revision rate, mostly to sleeve gastrectomy. There are few reported cases of conversion to Roux-en-Y gastric bypass (RYGB). The purpose of this video was to show the feasibility and safety, as well as the main technical aspects, of a laparoscopic conversion of gastric plication to RYGB.

Materials and methods A 40-year-old morbidly obese woman with a previous LGP, consulted for insufficient weight loss, weight regain, and gastroesophageal reflux disease (GERD) symptoms, and was converted to RYGB.

Results Surgical technique included lysis of adhesions between the stomach and the greater omentum, take down of the plication, partial gastrectomy of the devascularized fundus and body and conversion to RYGB. At 30 months, she has achieved a total weight loss (TWL) of 42.43% with no GERD symptoms recurrence.

Conclusion Conversion to RYGB is a safe and effective option to treat weight recidivism and GERD after LGP.

Keywords Bariatric surgery · Revisional surgery · Laparoscopic gastric plication · Laparoscopic greater curvature plication · Roux en Y gastric bypass · Gastric plication conversion

Introduction

Laparoscopic gastric plication (LGP) is a relatively new, simple, and low-cost bariatric surgical technique that provides gastric restriction without resection or implanting foreign bodies. However, the evidence is unclear regarding mid and long results in terms of weight loss and resolution of comorbidities [1]. There are few reports of revisional surgery after failed LGP [2, 3].

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Methods

This video shows a 40-year-old obese woman with no major comorbidities other than the non-alcoholic fatty liver disease (NAFLD), who underwent an LGP 1 year before consulting our group. Her body mass index (BMI) prior to LGP was 39.7 kg/m2. She had insufficient weight loss, with an initial 19% of her excess body weight and 6.8% of her total weight in the first 6 months, and then experienced weight regain until reaching a BMI of 41 kg/m2 and had new onset of typical gastroesophageal reflux disease (GERD) symptoms. Barium swallow and esophagogastroduodenoscopy revealed practically normal stomach anatomy in the fundus, with a progressive size decrease starting in the body.

Results

Laparoscopic exploration with the assistance of intraoperative endoscopy revealed a partially dehiscent plication at the level of the fundus. Surgical technique started with an extensive lysis of adhesions between the stomach and the greater omentum and take down of the plication, for a later gastric division over a non -plicated tissue. A Roux-en-Y

gastric bypass was performed in an antecolic-antegastric fashion, with a calibrated hand-sewn gastro-jejunostomy. Biliary and alimentary limbs measured 70 and 150 cm respectively. A devascularized gastric remnant was partially resected and the mesenteric defect was closed using non-absorbable sutures. She had no postoperative complications and was discharged on the second postoperative day. One year later, she had a Petersen's defect hernia that was successfully treated via laparoscopy, with reduction and defect closure. At 30 months, she has achieved an EWL of 99.58%, TWL of 42.43%, and a BMI of 25.08 kg/m2 with no GERD symptom recurrence.

Conclusion

Although technically demanding, conversion to RYGB seems to be a feasible, safe, and effective option in patients with previous LGP who fail to achieve adequate weight loss or develop GERD symptoms.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s11695-021-05382-1.

Declarations

Informed Consent Informed consent was obtained from the individual participant included in the study.

Human and Animal Rights All procedures performed 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.

Competing Interests The authors declare no competing interests.

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