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MULTIMEDIA ARTICLE

Conversion of Laparoscopic Roux en Y Gastric Bypass (RYGB) to Single Anastomosis Duodenal Switch (SADS)

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Abstract

Background The surgical management of weight regain following RYGB remains controversial. Simpler modifications such as endoscopic suturing and banding the bypass have had variable efficacy. Distalization of the bypass has resulted in a high risk of malabsorption-related complications as reported by Amor et al. (Obes Surg. 27(1):273-274, 2017); Borbély et al. (Obes Surg. 27(2):439-444, 2017); Thomopoulos et al. (Surg Laparosc Endosc Percutan Tech. 0(0):1, 2018); and Tran et al. (Obes Surg. 26(7):1627-1634, 2016). Conversion to a procedure such as duodenal switch (DS) or SADS with greater average weight loss would be logical but is technically challenging and is related to a high complication rate especially with the reformation of the stomach. In this video, we present the technique that we have adapted to make this complex case reproducible minimizing operative risk.

Methods A 49-year-old female weighing 154 kg (BMI 57 kg/m2) with sleep apnea disease underwent a laparoscopic RYGB in 2009. She had an initial weight loss of 47 kg but had complete recidivism with a weight of 151 kg (BMI 56 kg/m2). Upper gastrointestinal (barium swallow study) and esophagogastroduodenoscopy showed no evidence of fistula, with a normal pouch diameter and length with stoma size of 2 cm. Blood test showed no significant micro/macronutrient deficiencies. With super morbid obesity refractory to RYGB, it was our belief that conversion to SADS was the best alternative.

Results We introduced a subcostal camera trocar with Optiview and we observed epiploic adherences to the previous anastomosis. We placed an additional trocar to remove adhesions in the re-operative field. We measured the 300 cm of the small bowel proximal to the ileocecal valve. We next divided the antecolic Roux limb from the gastric remnant preserving the left gastric artery and divided the pouch proximal to the gastrojejunal anastomosis. We identified and mobilized the remnant stomach preserving the 8 lowest branches of the right gastroepiploic artery. After reaching the angle of His, we were able to separate the remnant and the pouch. The pouch was reshaped using a 42Fr bougie for guidance. A gastrostomy was made and a matching opening was created near the lesser curvature on the remnant. We then began gastrogastric anastomosis. First, the posterior layer was done and then the bougie was placed through into the remnant. The sleeve and fundic resection was done. The bougie was replaced by an oral gastric tube and the anterior layer of the anastomosis completed. This was tested with methylene blue. We next divided the duodenum postpylorus, preserving the right gastric artery. We performed and tested a hand-sewn duodeno-ileal anastomosis with a common limb length of 300 cm. There were no intra- or postoperative complications and the patient was discharged after 2 days.

Conclusions We believe that this video shows a reproducible technique for this complex anastomosis. Preservation of the distal epiploics makes the gastro-gastric anastomosis safer but requires direct dissection of the duodenum.

Keywords RYGB revisional procedure · Conversion of gastric bypass · Modified duodenal switch · Single anastomosis duodeno ileal switch · SADIS · SADS

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Compliance with Ethical Standards

Conflict of Interest Dr. Roslin reports personal fees from Ethicon, personal fees from Medtronics, outside the submitted work; Dr. Zarabi reports personal fees from Medtronics, outside the submitted work. Dr. Borden has nothing to disclose. Dr. Casajoana has nothing to disclose.

Statement of Informed Consent Informed consent was obtained from the patient.

Statement of Human and Animal Rights All the 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.

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