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MULTIMEDIA ARTICLE

# Chronic Fistula Post Laparoscopic Nissen Sleeve Gastrectomy: Conversion to Roux-en-Y Gastric Bypass

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## Video Abstract

**Background** Sleeve gastrectomy (SG) is the most frequently performed bariatric intervention worldwide, and obese patients have a higher risk of developing reflux symptoms compared with the general population [1, 2]. One of the controversies of SG is to perform it in patients with gastroesophageal reflux disease (GERD). Some studies have shown that SG may exacerbate GERD symptoms or even increase the risk of "de novo" postoperative GERD [3, 4]. Laparoscopic Nissen fundoplication is an effective treatment for patients with severe GERD. In order to avoid the Roux-en-Y gastric bypass (RYGB), some authors combined the SG with the Nissen fundoplication in morbid obese patients with GERD [5]. As after SG, postoperative gastric fistula may occur after Nissen SG. Persistent fistula after Nissen SG may be treated by conversion to RYGB.

**Methods** We present the case of a 35-year-old woman with long-standing morbid obesity, who presented to our institution seeking management options for her postoperative fistula. In August 2018, she underwent a laparoscopic Nissen SG in another institution. Her initial weight was 107 kg, height 172 cm, and body mass index (BMI) 36.27 kg/m$^2$. At the 7th postoperative day, she complained of severe abdominal pain and fever. A computed tomography (CT) scan was performed showing a massive supra-mesocolic pneumoperitoneum. An explorative laparoscopy was performed with evidence of a generalized peritonitis without identification of the orifice of the leak. Peritoneal lavage of the abdominal cavity was done and the patient was transferred to our institution. An upper gastrointestinal endoscopy was performed with evidence of a fistula on the gastric longitudinal staple line (8 mm in diameter), and a stenosis of about 15 mm on the distal gastric tube. A double pig-tail was placed. After 14 days, the patient underwent a gastric pneumatic dilatation of the stenosis placed at the antro-fundic region, without complications. Three months later, the fistula was persistent; therefore, after a careful nutritional and psychological evaluation and discussion with the patient, we decided to perform a conversion to a RYGB. The valve of the Nissen fundoplication was identified and divided using a stapler. The orifice of the fistula was identified. Resection of this valve, including the orifice of the fistula and the gastric tube, was done using a blue-load stapler ECHELON FLEX™ GST (Ethicon Endo-Surgery, USA) while creating the new gastric pouch. Then, we performed a Roux-en-Y gastric bypass with a 150-cm alimentary limb and a 50-cm biliary limb. The Petersen and the mesenteric defects were closed.

**Results** The blood loss was less than 100 cc and the operative time was 240 min. The postoperative period was smooth and uneventful; the patient was started on liquid diet on the second postoperative day and discharged at day 8. At 1 month postoperatively, the patient has lost 16 kg and the %EWL was 36.53%, %TWL 14.95% with a BMI of 30.84 kg/m$^2$. At 6 months postoperatively, the patient lost 24 kg, with a BMI at 26 kg/m$^2$. She does not complain of GERD, no vomiting, no abdominal pain, and no diarrhea.

**Electronic supplementary material** The online version of this article (https://doi.org/10.1007/s11695-019-04080-3) contains supplementary material, which is available to authorized users.

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**Conclusions** In cases of fistulas after Nissen SG, the surgery becomes more tedious and difficult. Conversion to RYGB seems a feasible and effective option to treat chronic fistula after Nissen SG.

**Keywords** Surgical technique · Roux-en-Y gastric bypass · Nissen sleeve · Revisional bariatric surgery

## Compliance with Ethical Standards

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

**Statement of Informed Consent** Informed consent was obtained from the participant included in the study.

**Statement of Human and Animal Rights** Informed consent was obtained from the participant included in the study.

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