

Conversion of Primary Endoluminal Endoscopic Surgery to Laparoscopic Roux-en-Y Gastric Bypass. Appearance of Anastomotic Ulcer 3 Months After Surgery[☆]



Conversión de cirugía endoscópica endoluminal primaria a *bypass* gástrico en Y de Roux laparoscópico. Aparición de úlcera de boca anastomótica a los 3 meses del postoperatorio

Bariatric surgery is the best method to achieve relevant weight loss that is maintained over time.¹ It is not free of risks and may not be indicated for mild-moderate obesity (BMI below 35 kg/m²). However, several current clinical guidelines state that surgery may be indicated in patients with grade I obesity (BMI: 30–35 kg/m²), poorly controlled type 2 diabetes and increased cardiovascular risk after an individualized assessment by a multidisciplinary committee.^{2,3}

In the last decade, intraluminal bariatric endoscopic procedures have been developed, such as the Primary Obesity Surgery Endoluminal (POSE) method. The POSE method consists of reducing the volume of the stomach, mainly at the gastric fundus, along with antral dysmotility to prolong satiety. This is done with endoscopic transmural sutures, creating plications in the fundus and in the proximal part of the antrum.⁴ To date, no serious complications have been described related to these endoscopic procedures, although the published series are small and long-term follow-ups are not yet available, given that these are new techniques and the published results are based on one- or 2-year patient follow-up.^{5,6} Many patients in whom the POSE method has failed need to later undergo a surgical bariatric procedure, and this previous manipulation of the stomach increases the risk of complications during surgery, which, despite the absence of evidence in the literature, can be expected because of the techniques involved and the previous changes made during the POSE method.

The main objective of this study is to describe the appearance of anastomotic ulcer after surgery for conversion from POSE to Roux-en-Y gastric bypass.

A 51-year-old woman, with a history of hypercholesterolemia and sleep apnea-hypopnea syndrome was referred to the obesity unit at our hospital, weighing 110 kg with a BMI of 38 kg/m². Two years earlier, she had undergone a POSE method, after which she only managed to lose 4 kg. The preoperative upper gastrointestinal endoscopy only detected changes in the gastric cavity secondary to POSE. The patient underwent laparoscopic Roux-en-Y gastric bypass, with a 60 cm biliopancreatic loop and a 150 cm intestinal loop. Intraoperatively, during the creation of the gastric pouch with

an endostapler (Echelon Flex, Johnson & Johnson, USA), numerous suture strands from the previous POSE procedure passed through the staple line (Fig. 1), which were cut. The mechanical linear reservoir-jejunal anastomosis was completed with the endostapler (Echelon Flex, Johnson & Johnson, USA) and the opening was closed with 2/0 absorbable barbed suture (V-Loc, Medtronic, USA). The anastomosis was created without incident and the reservoir and anastomosis were checked for leaks with methylene. The patient was discharged on the 2nd day after surgery, with no postoperative events. Recommendations given at discharge included omeprazole at a dose of 20 mg/day for at least 6 months.

Three months after surgery, the patient came to the emergency room due to severe abdominal pain that had been progressing over the previous 48 h, associated with vomiting. Abdominal CT scan showed nonspecific inflammatory changes adjacent to the reservoir-jejunal anastomosis. An upper gastrointestinal endoscopy revealed an anastomotic ulcer (Fig. 2). Treatment with omeprazole was initiated in a

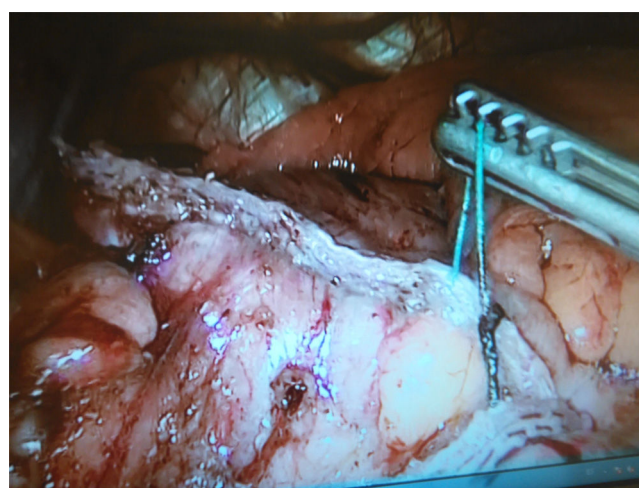


Fig. 1 – Intraoperative image: sutures from the previous POSE appearing through the staple line.

[☆] Please cite this article as: Ruiz-Tovar J, González J, García A, Levano-Linares DC, Durán M. Conversión de cirugía endoscópica endoluminal primaria a *bypass* gástrico en Y de Roux laparoscópico. Aparición de úlcera de boca anastomótica a los 3 meses del postoperatorio. Cir Esp. 2018;96:519–521.



Fig. 2 – Endoscopy image: anastomotic ulcer.

continuous infusion of 120 mg/day/3 days, which drastically improved the pain, and the patient correctly tolerated oral intake. The patient was discharged with omeprazole 40 mg/12 h. A follow-up endoscopy was performed 2 months after discharge, which demonstrated complete healing of the ulcer.

Anastomotic ulcers after Roux-en-Y gastric bypass can reach an incidence of up to 7%. Most cases appear in patients with risk factors (use of tobacco, alcohol or non-steroidal anti-inflammatory drugs). Fringeli et al.⁷ reported its appearance in the first 6 postoperative months or one year after surgery. Following their management protocol, patients took proton pump inhibitors (PPI) only during the first postoperative month, so all of their cases occurred in patients without PPI. The main causal agent of ulcers in the gastrojejunal anastomosis is the acid secretion of the gastric reservoir and its action on the intestinal mucosa, which is not prepared for acidic secretions. Precisely for this reason, PPI are indicated in the postoperative period. However, PPI do not eliminate the risk of ulcers. Garrido et al.⁸ described an anastomotic ulcer rate of 7.6% in the first 2 postoperative months, despite treatment with esomeprazole and no non-steroidal anti-inflammatory drugs. These authors suggested that the ischemia at the anastomosis and the suture and stapling material used, which act as foreign bodies, are possibly causative agents as well.

The etiology of the ulcer in our patient is unclear. She had no risk factors and was taking omeprazole at the time of diagnosis of the ulcer. Given that the ulcer appeared on the anastomosis, where prior POSE suture material was cut intraoperatively, we believe that the remains of the endoluminal sutures and the ischemia associated with the stapling of the previous plication may have possibly contributed even more to the development of the ulcer. As more and more endoluminal procedures are being performed and their conversions to bariatric surgical procedures are increasing, in the future we will have data about the real incidence of this complication in these patients.

The limited evidence in the literature for weight loss results using the POSE method indicate that these are limited, providing no long-term data. Espinós et al. reported an

average 6-month weight loss of 13 kg, representing a percentage of excess weight lost (%EWL) of 49%.⁵ Lopez-Nava Breviere et al. published an average weight loss of 16.6 kg per year, representing a %EWL of 44.9%.⁴ The American Society for Gastrointestinal Endoscopy (ASGE) recommends that bariatric endoscopic methods should achieve a %EWL of at least 25%.⁹ However, bariatric surgery societies require that, in order to consider a surgical procedure successful, a %EWL of at least 50% should be reached, and the final BMI should be lower than 35 kg/m². Therefore, endoscopic procedures are inferior to surgery and cannot be considered an alternative. In addition, we must bear in mind that these series also include patients with BMI below 35 kg/m², and by having less excess weight, a smaller weight loss could be considered an acceptable %EWL. Lastly, and given that these endoscopic procedures are similar to sleeve gastrectomy, there may be a similar weight gain after the 3rd year.¹⁰ However, this is uncertain as there are no results of these techniques in the mid-long term. Although the ultimate goal of both bariatric surgery and endoscopic methods is weight loss, it should possibly be considered that the population group to which the POSE method may be directed is different from candidates for bariatric surgery; thus, endoscopy would be included within the therapeutic options for patients with mild obesity, requiring less weight loss, or even for overweight patients.

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2173-5077/

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Primary Sarcoma of the Pancreas: An Unusual Indication for Pancreaticoduodenectomy[☆]



Sarcoma primario de páncreas: una indicación infrecuente de duodenopancreatectomía cefálica

95% of pancreatic tumors are epithelial; adenocarcinoma represents 85%-95% and neuroendocrine tumors <5% of primary neoplasms. Non-epithelial and non-neuroendocrine tumors are extremely rare (<0.1%).¹

Treatment for malignant periampullary tumors involves pancreaticoduodenectomy (PD), when the aim is curative intent, or palliative care and symptom relief when there is locally unresectable or disseminated disease.

The objective of this communication is to present the case of a patient who underwent surgery for primary sarcoma of the head of the pancreas.

The patient is a 50-year-old woman with a medical history of Guillain-Barré syndrome, cesarean section and laparoscopic total hysterectomy due to cervical adenocarcinoma. She reported 2 weeks of jaundice and choloria, with no abdominal pain or weight loss. Examination revealed jaundice of the skin and mucous membranes, with a soft abdomen that was painless and presented no palpable masses. The altered hepatic profile showed: total bilirubin 6.7 mg/dL, direct bilirubin 5.5 mg/dL, alkaline phosphatase 840 μ/L, GGT 547 μ/L, GOT 254 μ/L and GPT 410 μ/L. Abdominal ultrasound showed a mass measuring 7.7 cm×7.2 cm×6.9 cm that projected toward the head of the pancreas, with dilatation of the extrahepatic bile duct but no changes to the intrahepatic duct, diffuse hepatic steatosis or cholelithiasis. Thoracic, abdominal and pelvic computed tomography scans with contrast showed a well-demarcated right retroperitoneal perirenal mass in contact with the rear of the uncinate process of the pancreas, but giving the impression of a primary retroperitoneal mass; the bile duct was slightly dilated. Magnetic resonance imaging with gadolinium demonstrated a solid, cystic, heterogeneous tumor that appeared to originate in the head of the pancreas and the uncinate process, in contact with the superior mesenteric artery and the splenic-mesenteric-portal axis, with no

vascular invasion (Fig. 1) but compressing the bile duct, whose extrahepatic segment was dilated (Fig. 1B).

The case was discussed in a multidisciplinary committee. Given the characteristics of the lesion (solid-cystic, heterogeneous, well-defined, large tumor size with a capsule image during the preoperative study, and symptomatic), we decided that there was no need to perform preoperative endosonography with needle aspiration or preoperative biliary drainage. With a preoperative diagnosis of pseudopapillary tumor of the pancreas, a disease typical of younger women, a PD was scheduled.

A supra- and infraumbilical midline laparotomy was performed, and the cavity was explored, finding no carcinomatosis. Palpation of the head of the pancreas detected a tumor measuring approximately 12 cm in diameter in the uncinate process; the pancreas was hard and slightly atrophic, with a distended gallbladder. PD was performed with Child's loop reconstruction, duct-to-mucosa pancreaticojejunostomy with a transanastomotic stent (Blumgart technique), hepatic-jejunal anastomosis and end-to-side antecolic gastrointestinal anastomosis, leaving in 2 Jackson-Pratt® drains (Fig. 2A).

In the postoperative period, a type B pancreatic fistula (ISGPS2 classification²) developed, which was managed with intravenous antibiotics, providing a positive clinical response. The patient was discharged on the 8th postoperative day with oral antibiotics and a Jackson-Pratt® drain, which was withdrawn on the 14th postoperative day.

The histopathology study confirmed a well-defined tumor in the head of the pancreas (10×7 cm) that was stromal in appearance and compatible with low-grade myofibroblastic sarcoma (G1), no perineural, vascular or lymphatic infiltration with free surgical margins, and 23 lymph nodes with no evidence of neoplasia (Fig. 2B). Immunohistochemistry for smooth muscle actin, S100, CD34, CD117, ALK and desmin was negative; Ki-67 (20%) and vimentin were positive, thereby

[☆] Please cite this article as: Muñoz Castro C, Sepulveda Diaz G, San Pedro Sánchez A, Lahsen Humeres JP. Sarcoma primario de páncreas: una indicación infrecuente de duodenopancreatectomía cefálica. *Cir Esp*. 2018;96:521-523.