



Roux-en-O Gastric Bypass. Treatment of a Severe Complication

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Abstract

Roux-O reconstruction in Y-bypass surgery is a rare and potentially devastating complication that can often be misdiagnosed. This occurs when the biliopancreatic loop anastomoses to the gastric pouch with the consequent evolution of the patient with intestinal obstruction, abdominal pain, nausea and/or bilious vomiting. We described A 27-year-old male patient who underwent surgery for morbid obesity with this complication. In conclusion, it should be considered that this less mentioned complication should be treated preventively, and in established cases, a Y-bypass reconstruction is the most appropriate solution.

Keywords: *Roux -en- O, gastric bypass, complications of bariatric surgery*

Introduction

Roux-O reconstruction in Y-bypass surgery is a rare and potentially devastating complication that can often be misdiagnosed. This occurs when the biliopancreatic loop anastomoses to the gastric pouch with the consequent evolution of the patient with intestinal obstruction, abdominal pain, nausea and/or bilious vomiting ^[1,2]. Unfortunately, radiological studies and even surgical exploration may not correctly detect this atypical and severe complication ^[3]. We reported and checked this case based on SCARE guidelines ^[4].

Case report

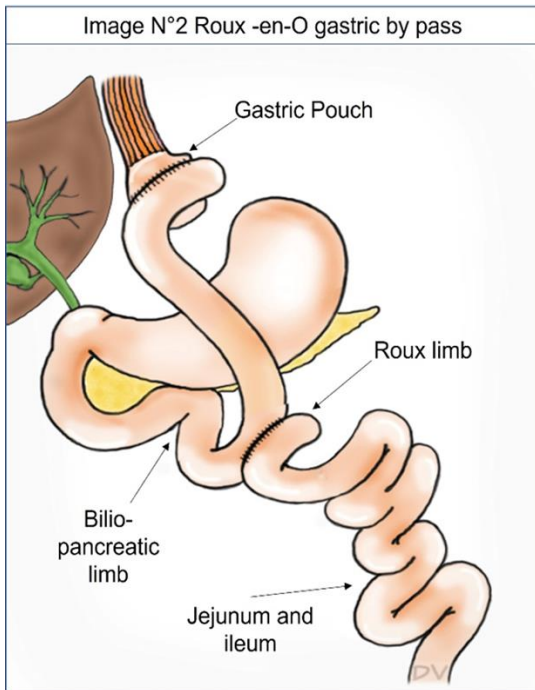
A 27-year-old male patient who underwent surgery for morbid obesity underwent a Roux-en-Y bypass with a 100 cm biliopancreatic loop and a 100 cm food loop. The patient undergoes an immediate postoperative period without complications, which is why he is discharged at 24 hours. After 14 days, when he began with the intake of solids, he reported abdominal and epigastric pain accompanied by heartburn and nausea. He is evaluated, not objectifying data relevant to the physical examination, for which treatment with prokinetics is established. The patient has periods of remissions and exacerbations, added to binge eating by a close relative.

For this reason, laboratory analysis and upper gastrointestinal video endoscopy were requested. There was no evidence of stenosis, signs of erosions at the level of the anastomosis and abundant fluid from the alimentary loop. The patient evolved favourably, although he reported continuing with reflux. After the copious intake of flour and carbonated drinks, after six weeks, he consulted again for epigastric and retrosternal abdominal pain with significant reflux. Computed tomography was performed, which revealed significant dilation of the alimentary loop. Image N°1

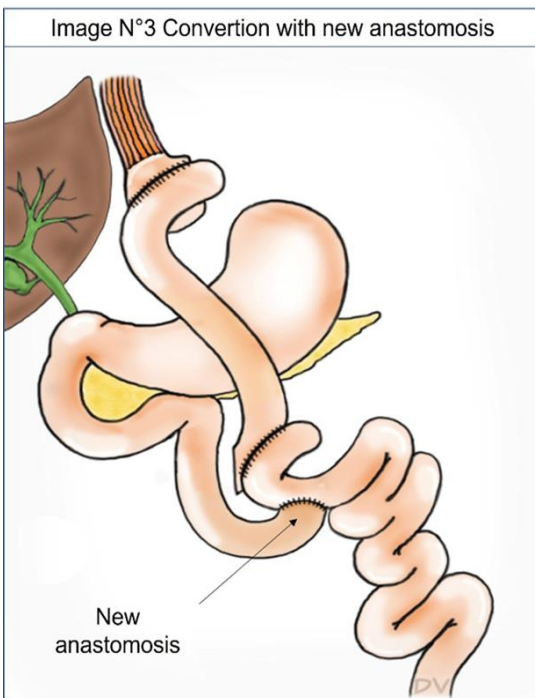
Image N°1 Abdominal computed tomography



Surgical exploration was decided, so an exploratory laparoscopy was performed, verifying intestinal adhesions, a dilated biliopancreatic loop anastomosed to the gastric pouch, and the food loop anastomosed 50 cm from the angle of Treitz. Careful dissection was performed to confirm that it was a Roux-O mount. Image N°2



To be less aggressive, it was decided to have a biliary lift section close to the foot anastomosis and to make a new one 30 cm from the previous one. In this way, the Y-shaped bypass was formed, although with an antiperistaltic segment. Image N°3 The patient had a favourable evolution during the immediate postoperative period, so he was discharged on the 4th day of the same. He had a complete remission of the symptoms; he only referred reflux during the first 30 days, although less intense than the one he suffered before surgery.



Discussion

The configuration of a Roux-O in gastric bypass surgery is a rare situation with few reports in the literature. However, it can lead to significant complications and even devastating sequelae. This type of setup can be carried out when the intervening team does not have adequate experience in bariatric surgery; when measures are not taken adequately to identify each intestinal segment, mainly when there are previous surgeries and in cases where the bypass is

performed with a biliary loop that is too long, such as in the patient presented. In this type of reconstruction with the biliopancreatic loop anastomosed to the gastric pouch, an inadequate anastomosis to the foot (jejunal-jejunal) is also usually made, which may cause torsion of the same, causing a pseudo-volvulus with the consequent sub-obstruction or the potential to generate a complete obstruction [5]. All of this makes oral intake difficult for two reasons: first, in cases of torsion and pseudo-volvulus in the jejunum-jejunal, anastomosis results in obstruction. And, secondly, the food must transit against the peristalsis of the biliopancreatic loop. Only after passing the jejunum-jejunostomy does food move in an isoperistaltic direction. Bile, however, flows from the duodenum into the gastric pouch, resulting in bile reflux, emesis, and esophagitis, as reported by our patient. Therefore, biliary emesis, never a normal symptom after gastric bypass, can be a cardinal symptom for suspected Roux-O montage [1,5]. Studies are not usually decisive when it comes to arriving at a certain diagnosis. Contrast computed tomography usually only shows dilatation of the proximal intestine and sometimes of the gastric pouch, although the true cause of obstruction is confirmed on surgical exploration. In the presence of symptoms compatible with reflux and a video endoscopy that shows the presence of a bile lake, a bypass with a Roux-O configuration can be highly suspected. It can also be assessed by injection of technetium-99m labelled hydroxyminodiacetic acid. The hepatocytes excrete this, and in these cases, the flow from the liver to the duodenum and into the oesophagus can be seen with sequential gamma camera images. Treatment will depend on the clinical presentation, although surgical resolution is always the precise indication. In cases that debut as a complete obstruction, emergency intervention should be made, in situations in which the presentation is as in our case, with symptoms of digestive intolerance, abdominal pain and emesis, it will be time to carry out the appropriate studies to be able to make a diagnosis [6,7]. The surgery necessary to correct the incorrect configuration carries an additional risk of postoperative complications in this inherently high-risk population. Therefore, prevention should always be considered the best option. This is carried out with the marking of the biliopancreatic loop and the alimentary loop for correct identification, leaving a shorter biliary loop segment so that it does not reach the gastric pouch. If the general condition of the patient allows it, the most appropriate option is complete reconstruction in a Y-bypass. If there is not enough experience, the patient should be transferred to a more complex centre with more experience in bariatric surgery. In cases where complete reconstruction is very difficult, and there is no intestinal torsion at the level of the jejunal-jejunal anastomosis, the section of the biliary loop close to the foot anastomosis with the creation of a new anastomosis at a prudent distance so that the bypass in Y preserve an adequate length, it could be considered a less complex alternative to minimize risks. The drawback with this preparation is the antiperistaltic intestinal segment that remains before the new anastomosis to the foot, which could cause a disorder in the progression of food. In the case that we have mentioned, the patient referred reflux in the first 30 days, but of less intensity than that presented after the initial surgery.

Conclusion

Roux-en-O gastric bypass should be considered a rarely mentioned complication that must be treated preventively, and in established cases, reconstruction with Y-bypass is the most appropriate solution [2,8]. However, when there is no obstruction at the level of the jejunum-jejunal anastomosis and the risks of a more important surgery are high, the conversion, with section and new anastomosis as we have described, could be considered a valid alternative.

Ethical approval

The ethical approval has been exempted by the institution

Conflict of interest

The authors declare that they have no conflict of interest

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Patient Consent

Obtained.

Author Contributors

N. Daniel Velasco Hernandez drafted the article and made drawing. Santiago B. De Battista drafted the article. Lucas A. Rivaletto, Carolina Gómez Oro and Alan Saens Benites contributed to the editing and review. All authors approved the submission of the manuscript.

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