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Gastric bypass with preservation of laparoscopic Nissen, an option for patients with morbid obesity previously operated on for gastroesophageal reflux.

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Summary:

Gastroesophageal reflux disease (GERD) is closely related to obesity; in fact, up to 45% of patients with obesity suffer from it.

It is now widely accepted to perform a gastric bypass over a fundoplication in patients with GERD and morbid obesity.

Gastric bypass fundoplication revision surgery is technically complex and considerably increases morbidity and mortality. Therefore, in selected patients, with a normalized, functioning fundoplication and if they also do not have previous gastrolysis, the gastric reservoir can be made respecting the Nissen ant reflux valve, obtaining good results in the short and medium term.

We present the case of an obese patient, previously operated on for a Nissen-type fundoplication without gastrolysis, who is currently asymptomatic for GERD and who is referred for evaluation of bariatric surgery to our Unit.

After laborious adhesiolysis and checking the normalization of the fundoplication, a simplified laparoscopic gastric bypass with a manual Higa-type anastomosis is performed without disassembling the previous Nissen. The patient evolved favorably and was discharged on the third postoperative day. The percentage of overweight lost (PSP) has been 68% in the first 9 postoperative months.

Keywords:

- Nissen fundoplication
- Obesity
- Gastric bypass

Introduction

In recent years, an increase in the number of obese patients in society has developed. This epidemic is associated with numerous comorbidities including gastroesophageal reflux disease (GERD), type 2 diabetes mellitus, dyslipidemia, high blood pressure, hypoventilation-sleep apnea syndrome (SAHS).

Y-Roux gastric bypass has become the standard technique for weight loss and resolution of these concomitant pathologies, among which is GERD (1).

As for gastroesophageal reflux, it has an estimated prevalence between 20-40% in the US and Europe. It is associated with obesity as we have previously described, due to the increase that abdominal pressure causes on the lower esophageal sphincter (2).

The increasing prevalence of gastroesophageal reflux and obesity, combined with the rise of laparoscopic ant reflux surgery, implies that many patients who are candidates for bariatric surgery have already undergone previous ant reflux surgery (3). In general, ant reflux surgery is less effective in obese patients due to the high percentage of leaflet ruptures and migrations that occurs in this group of patients (2).

Currently, it is widely accepted to perform a gastric bypass over a fundoplication in patients with GERD and morbid obesity (2), since with this technique a good weight loss is obtained as well as an optimal control of reflux (1).

The laparoscopic conversion of a Nissen-type fundoplication to a bypass is technically complex and associates a high incidence of perioperative complications (2).

We describe the performance of a laparoscopic gastric bypass preserving the previously performed Nissen fundoplication.

Material and methods

A 45-year-old man with severe obesity (grade II), weight of 114 kg and current BMI of 38.6 kg / m2, smoker of 2 cigarettes / day, severe osteoarthritis, and steatosis, who underwent surgery 5 years ago in another hospital with GERD. and hiatus hernia, which undergoes laparoscopic Nissen fundoplication, after which he experiences significant improvement in his GERD, being asymptomatic from this point of view when requesting evaluation by our Unit.

In the operative sheet of this intervention it is reflected that no short vessel is sectioned prior to the preparation of the fundoplication.

Gastroscopy and preoperative abdominal CT are performed, checking that the fundoplication is correctly positioned.

Results

After laborious adhesiolysis, a simplified laparoscopic gastric bypass with manual anastomosis was performed with resorbable V-loc 3/0 without removing the previous Nissen. The length of the biliary loop was 60 cm measured from the Treitz ligament, and the alimentary one 150 cm. The meso and Petersen's orifice were closed with non-absorbable V-loc 2/0. The patient evolved favorably and was discharged on the third postoperative day.

The PSP has been 68% in the first 9 postoperative months.

Discussion

Due to the rise of laparoscopic techniques in ant reflux surgery and the high prevalence of obesity and GERD, it is not surprising that more and more patients undergoing previous GER appear in whom bypass surgery is indicated, either because they wish to lose weight, or because your GERD has recurred, which is not uncommon in this type of patient.

Laparoscopic conversion from ant reflux surgery to gastric bypass is possible and safe (1,4), although it implies a morbidity rate (21% vs. 8% of conventional bypass), operative time, and conversion rate to major open surgery (1 , 2.5). It is a complex surgery, which is recommended to be performed by expert bariatric surgeons. The approach to the fundus and the heart area, as well as access to the left diaphragmatic abutment, are usually hindered by adhesions that can also involve the liver and spleen (3). Relatively frequently, during dissection, the fundus is devitalized and its excision is necessary (5).

To reduce the incidence of these perioperative complications, Ibele et al (6) propose to preserve the fundoplication when the gastric reservoir is made. A possible drawback would be the excessive length of the reservoir (3), with the subsequent loss of restrictive capacity of the technique and insufficient weight loss in the postoperative period. In our case, despite being operated on the ant reflux technique in another center, we had access to the previous operative sheet, which reflected the absence of a short vessel section. Intraoperatively, we found that, due to this, the fundoplication was very tight to the cardio area, with the amount of fundus used in making the plication being small. In fact, we calculated that the size of our reservoir was around 30 ml, similar to the one we performed when we do a gastric bypass do novo (calculated during the methylene blue test).

In the first 9 postoperative months, the weight loss has been adequate with 68% PSP, which has led to a notable improvement in arthralgia and overall quality of life.

In the short and medium term, our results are excellent, however, we must be cautious as we do not have long-term results and, in addition, our experience is limited, a single case to date.

Regarding the technique practiced, we did not resect the stomach, which is very interesting in case it is necessary to revert to normal anatomy in the future.

Some authors, to avoid excessive dissection of the esophagus-cardio area, propose to perform a Scopinaro technique in these cases, although it is currently almost in disuse due to protein malnutrition and the associated anastomotic ulcer (3).

Conclusions

Gastric bypass fundoplication revision surgery is technically complex and increases morbidity and mortality.

In selected patients, with normalized, functioning fundoplication and if they also do not have previous gastrolysis, it is possible to make the gastric reservoir respecting the Nissen ant reflux valve, allowing not only the control of GERD, but also the loss of excess weight.

In the present case, the stomach was not resected either, which is very interesting, in case it is necessary to rebuild the normal anatomy in the future.

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