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Case Report

# Erosion and Gastric Inclusion: Late Complication of Lap-Band

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## Abstract

**Background:** The "lap-band" is one of the most used bariatric techniques for its safety and effectiveness [1-3]. Its postoperative complications, although rare, can be severe. Gastric erosion, band slippage, gastric duct dilatation, esophageal dilatation and complications in ports are the most frequent [4].

**Clinical Case:** We present the case of a 43 year-old man with a lap-band for 12 years that consults for epigastric pain with localized defense. The CT and endoscopy revealed gastric erosion and partial migration of the lap-band, so a laparoscopic gastrotomy was performed and the band was removed without incident.

**Discussion and Conclusions:** The postoperative follow-up of a patient with lap-band is essential to diagnose complications efficiently and obtain acceptable results [2].

Erosion and invasion of the wall by the gastric band can occur acutely or chronically [1]. The acute picture can cause peritonitis due to gastric perforation. The chronic form can be asymptomatic or cause an alteration in the function of the band. Its diagnosis is difficult because its presentation is variable.

CT with intravenous contrast is the gold-standard diagnostic test. The EDA is an alternative that can make possible the extraction in those patients that have a inclusion greater than 50% in the wall of the stomach [7,8]. The treatment is always removal of the band. If endoscopic removal fails, try laparoscopy [12].

***Keywords:*** *Obesity; Laparoscopy/*Adverse Effects; Bariatric Surgery*

## Background

The laparoscopic adjustable gastric banding (LAGB) or lap band is one of the most used bariatric techniques for its safety and efficacy [1-3]. It is easily reproducible and is also adjustable, potentially reversible and feasible laparoscopically [1,2].

Postoperative complications are rare. Gastric erosion, band slippage, gastric duct dilatation, esophageal dilatation and complications in ports are the most frequent [4].

## Clinical Case

We present an unusual case of erosion and intragastric migration after twelve years of the placement of a LAGB.

A 43-year-old man with morbid obesity type III (BMI 45.8 kg/m$^2$), with no other relevant clinical history, who was placed on a LAGB 12 years ago and who left the follow-up in consultation. In the last year, the patient reported having weight gain and intermittent clinical of vomiting, heartburn, food intolerance and gastrointestinal complaints. He went to the Emergency Service due to epigastric pain with localized defense and the analytical revealed leukocytosis and neutrophilia. Plain radiography and abdominal computed tomography (CT) were reported as normal. He was admitted for observation. The evolution at the Hospital was favorable with conservative treatment, being discharged on the 5th day of admission. In view of the persistence of the clinic, the CT scan was reviewed, noting images compatible with gastric erosion due to LAGB that had initially gone unnoticed (Figure 1, 2). An upper digestive endoscopy (EDA) was performed that confirmed the erosion of the gastric wall with partial migration of the adjustable band to the interior of the cavity. After a failed attempt to extract by gastroscopy, a laparoscopic gastrotomy and removal of the band was scheduled and proceeded without incident (Figure 4). The patient decided not to associate new bariatric surgery. The evolution of the patient was satisfactory, being discharged on the 3$^{rd}$ postoperative day. He is currently asymptomatic after one year of follow-up, with moderate weight gain, and continues to reject a new bariatric intervention. The treatment is about changing dietary habits and exercise.

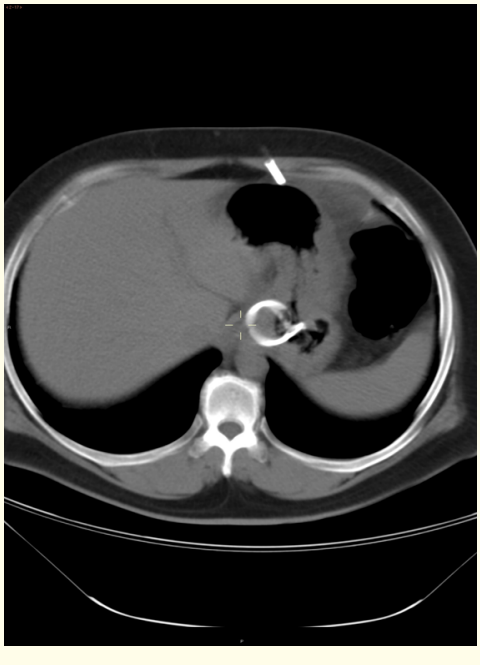

***Figure 1***

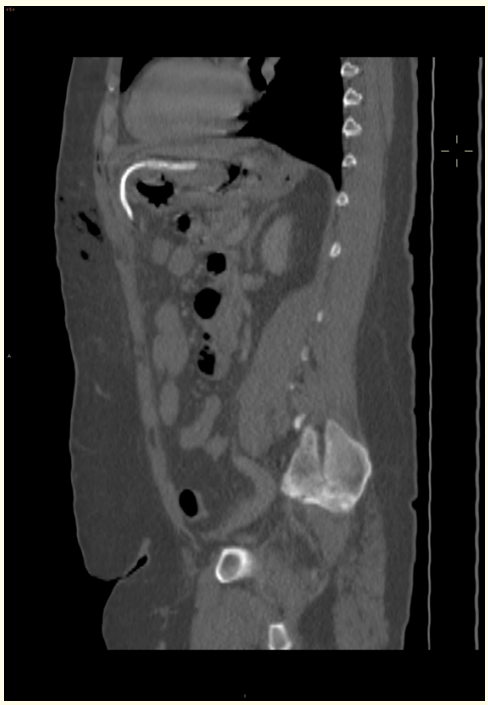

***Figure 2***

***Figure 3:*** *3D reconstruction where the gastric inclusion of the LAGB is observed.*

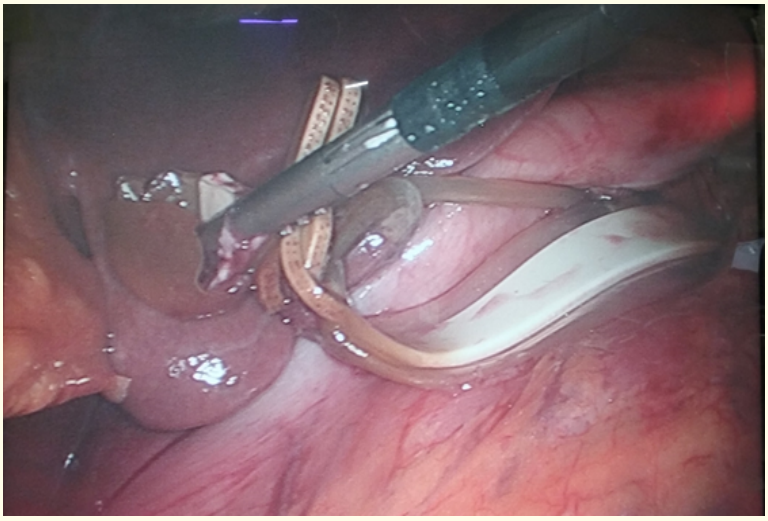

***Figure 4***

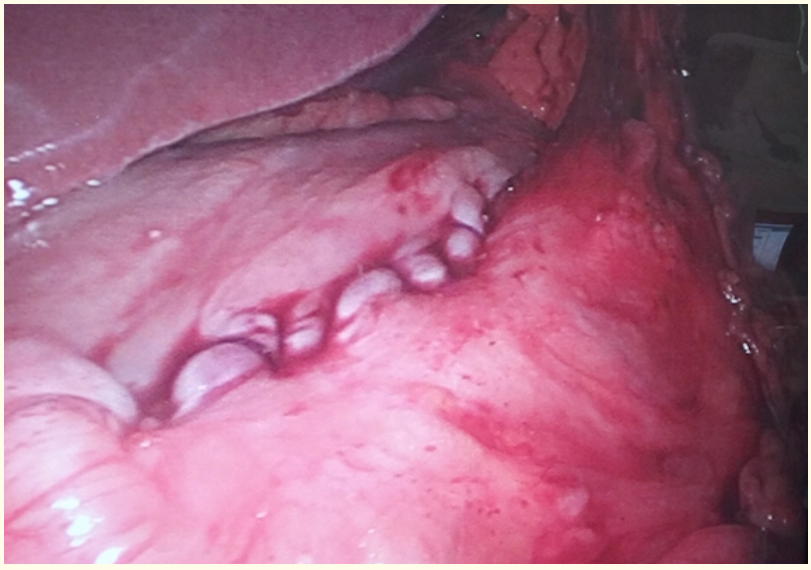

***Figure 5***

***Figure 4 and 5:*** *Laparoscopic gastrotomy and LAGB extraction. Figure 4 shows gastric band included in the gastric cavity and in figure 5, we visualize gastric wall closure after withdrawal of LAGB.*

## Discussion

Obesity is a chronic, multifactorial disease that currently lacks curative treatment. Conservative treatment consisting of diet, lifestyle modification, exercise and pharmacological treatment, can achieve weight loss of approximately 10% in the medium term. However, this treatment is insufficient in patients with morbid obesity; bariatric surgery is postulated in these cases as the most effective treatment [2,4].

LAGB, Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG), are considered the first-line treatment choice in patients with morbid obesity (IMC > 40) [5]. Nowadays, there are no studies that objectively compare complication rates after laparoscopic bariatric treatment options performed at a single institution [6].

In a prominent study (Parikh., *et al*. 2006) objectively classify and compare complications resulting from LABG, RYGB and biliopancreatic diversion (BPD) with duodenal switch (DS). They establish complications that caused irreversible decrease in organ function, organ resection or death, were 0.2% for LAGB, 2% for RYGB and 5% for BPD DS. In addition, they determine that the LAGB group had a three and a half times lower probability of a complication compared with the BGYR group and with the DBP DS group (odds ratio, 3.4, 95% CI, 2.2 ± 5.3, p = 0.001) [6]. So definitely, the LAGB is safer than RYGB or the DBP DS because it has a lower rate of complications and the one that occurs is less severe [5,6].

Morbidity and mortality rates of the LAGB are 1-3% and 0.05% respectively [2,4,7]. The postoperative follow-up of these patients in consultation is an essential requirement to diagnose complications efficiently and obtain acceptable results [2].

Erosion and invasion of the wall by the gastric band can occur acutely or chronically [4]. The acute picture is characterized by the release of gastric contents into the peritoneum, causing peritonitis due to gastric perforation. The chronic form can be asymptomatic and cause an alteration in the function of the band or not achieve the delay in the passage of food despite the adjustments. As a late complication, although infrequent, it can occur at any time. Its incidence ranges from 1% to 5% but it is believed that the percentage may be underestimated [1]. Diagnosis is difficult since its presentation can be very variable, from dysphagia to a reservoir infection or a localized gastric abscess, and the symptoms are usually nonspecific [4] and may even go unnoticed [1]. It is a chronic process. It is believed that it may be due to ischemia of the gastric wall due to the presence of an excessively adjusted LAGB, to the infection after multiple punctures for filling the device or by internal pressure after multiple and copious dietary transgressions [1,8].

CT with intravenous contrast is the diagnostic test of choice, since it allows to identify with precision the location of the band and the repercussions of its migration [12]. It is also possible to perform an EDA, a diagnostic-therapeutic method that also enables the extraction of LAGB in those patients who have a penetration greater than 50% in the wall of the stomach [9,10].

The treatment is always the removal. If endoscopic extraction fails or is not feasible, it should be attempted by laparoscopy, being preferable by endoluminal route through gastrotomy, thus avoiding the erosion/inclusion zone [12]. In the same intervention, a second lap band can be placed or another alternative bariatric intervention can be performed, which can also be deferred to a second time [11].

## Conclusions

LAGB is one of the most frequent restrictive bariatric surgeries, with low morbidity and mortality [2,4,7].

The postoperative follow-up of a patient with lap-band is essential to diagnose complications efficiently and obtain acceptable results [2].

CT with intravenous contrast is the gold-standard diagnostic test. The EDA is an alternative that can make possible the extraction in those patients that have a inclusion greater than 50% in the wall of the stomach [7,8].

The treatment is always the removal of the band. If endoscopic removal fails, we should try laparoscopy [12].

## Conflict of Interests

- The authors declare that they have no conflicts of interest.
- The manuscript information has not been previously presented in any congress or conference.

## Bibliography

1. Ayloo S and Bueno R. "Band erosion: laparoscopic removal of lap-band". *Surgical Endoscopy* 23.3 (2009): 657-658.

2. Blanco Engert R., *et al*. "[Video-laparoscopic placement of adjustable gastric banding (lap-band) in the treatment of morbid obesity. Preliminary results after 407 interventions]". *Gastroenterology and Hepatology* 24.8 (2001): 381-386.

3. Lago Oliver J., *et al*. "[Adjustable gastric band as surgical treatment for morbid obesity. Are worldwide results reproducibles in Spain?]". *Cirugia Espanola* 91.5 (2013): 301-307.

4. Eid I., *et al*. "Complications associated with adjustable gastric banding for morbid obesity: a surgeon's guides". *Canadian Journal of Surgery* 54.1 (2011): 61-66.

5. Joo MK. "Endoscopic Approach for Major Complications of Bariatric Surgery". *Clinical Endoscopy* 50.1 (2017): 31-41.

6. Parikh MS., *et al*. "Objective comparison of complications resulting from laparoscopic bariatric procedures". *Journal of the American College of Surgeons* 202.2 (2006): 252-261.

7. McBride CL and Kothari V. "Evolution of laparoscopic adjustable gastric banding". *Surgical Clinics of North America* 91.6 (2011): 1239-1247.

8. Blero D., *et al*. "Endoscopic removal of dysfunctioning bands or rings after restrictive bariatric procedures". *Gastrointestinal Endoscopy* 71.3 (2010): 468-474.

9. Collado-Pacheco D., *et al*. "Endoscopic extraction of adjustable gastric bands after intragastric migration as a complication of bariatric surgery: technique and advice". *Endoscopy International Open* 4.6 (2016): E673-E677.

10. Cortes Arriagada C., *et al*. "[Gastric band erosion as complication of bariatric surgery. Case report and review of the literature]". *Gastroenterology and Hepatology* 30.8 (2007): 465-468.

11. Niville E., *et al*. "*Lap-Band erosion: incidence and treatment*". Obesity Surgery 11.6 (2001): 744-747.

12. Committee of videoendoscopic surgery and mininvasive commission of bariatric and metabolic surgery. Guidelines for the management of complications of bariatric surgery (2010).

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