International Surgery Journal
Caires FG et al. Int Surg J. 2025 Feb;12(2):206-207
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: https://dx.doi.org/10.18203/2349-2902.isj20250146

Case Report

Internal hernia secondary to laparoscopic adjustable gastric band connecting tube loop

Francisco Girão de Caires[1]*, Mafalda Nunes[1], Priscila Flores[2], Carolina Carvalhinha[3], António G. Caires[4], Rita Loureiro[1]

[1]Department of General Surgery, Unidade Local de Saúde do Oeste, Caldas da Rainha, Portugal
[2]Department of Intensive Care Medicine, Unidade Local de Saúde do Médio Tejo, Abrantes, Portugal
[3]Department of Internal Medicine, Hospital Dr. Nélio Mendonça, Funchal, Portugal
[4]Department of General Surgery, Hospital Dr. Nélio Mendonça, Funchal, Portugal

Received: 11 December 2024
Accepted: 17 January 2025

***Correspondence:**
Dr. Francisco Girão de Caires,
E-mail: Franciscocairesmd@outlook.com

ABSTRACT

Laparoscopic adjustable gastric banding (LAGB) has been a widely used surgical technique for the management of morbid obesity. This report presents the case of a 70-year-old woman who developed small bowel obstruction (SBO) due to an incarcerated internal hernia, a rare complication of LAGB, caused by the connecting tube. The condition was successfully managed with urgent laparoscopy. As the use of LAGB continues to decline worldwide, such complications may become even rarer.

Keywords: Obesity surgery, Bariatric surgery, Gastric banding, Complications, Emergency surgery, Small bowel obstruction, Internal hernia

INTRODUCTION

Approximately 75% of small bowel obstructions (SBO) result from intra-abdominal adhesions, typically following previous surgical interventions.[1] Within bariatric surgery, SBO is among the most common surgical emergencies.[2] Laparoscopic adjustable gastric banding (LAGB) has been recognized by the international federation for the surgery of obesity and metabolic disorders (IFSO) as a bariatric and metabolic procedure for long-term weight management in morbidly obese patients.[2]

However, its usage has declined significantly, now comprising less than 5% of all bariatric surgeries.[3] Intestinal obstruction due to the LAGB connecting tube is an exceedingly rare complication, with only 11 cases documented in the literature by 2014.[4] This report describes a case of SBO caused by intestinal incarceration, attributed to the LAGB connecting tube.

CASE REPORT

A 70-year-old female presented to the Emergency Department with abdominal pain, nausea, and vomiting. The medical history included LAGB placement 17 years earlier, which had been fully deflated. The patient had a calcified uterus, with no other significant medical or surgical history. On examination, the patient exhibited general abdominal tenderness and a distended abdomen. Her vital signs included a temperature of 36.8ºC, pulse of 92 bpm, respiratory rate of 16 bpm, blood pressure of 158/83 mmHg, and oxygen saturation of 98% on room air. The patient's BMI was 31.06 kg/m².

It was not possible to insert a nasogastric tube. Laboratory results showed no leucocytosis, and the metabolic panel, liver function tests, ions, and lactic acid levels were within normal ranges. The C-reactive protein (CRP) level was slightly elevated at 4.7 mg/dl. Abdominal radiography revealed air-fluid levels and a

distended small bowel, while a CT scan confirmed the presence of SBO due to an internal hernia caused by the LAGB connecting tube (Figure 1).

The patient underwent an exploratory laparoscopy, which confirmed the diagnosis. The gastric band was intact, but the port was abnormally positioned in the midline of the abdominal wall, leaving an excessive length of connecting tube free within the abdominal cavity. This led to a loop formation around the mesentery, causing bowel obstruction. The gastric band was removed, and a small laparotomy was performed to ensure bowel viability and complete adhesiolysis (Figure 2). The procedure was without intraoperative complications, and the patient's postoperative recovery was uneventful. She was discharged on the second postoperative day on a soft diet.

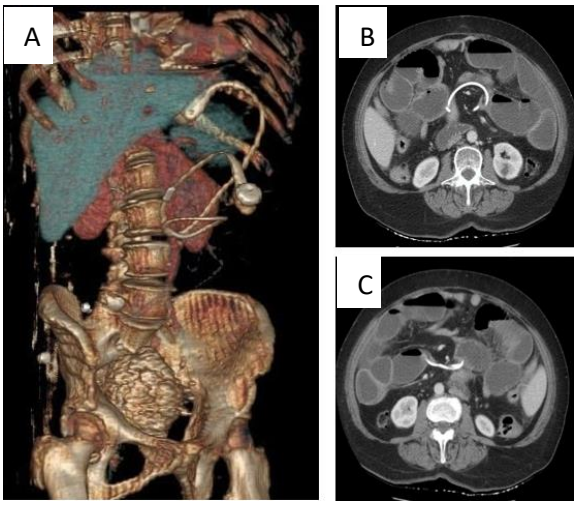

Figure 1 (A-C): Computed tomography scan.

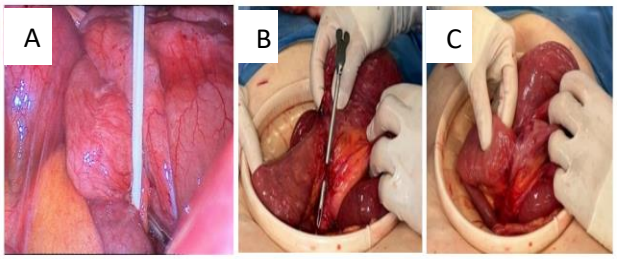

Figure 2 (A-C): Intraoperative findings.

DISCUSSION

Although the short-term complication rates associated with LAGB are low, long-term complications can be significant, with rates as high as 30-70%.[5] SBO, a common complication in bariatric surgery, may present atypically in patients with LAGB leading to diagnostic challenges. Conservative management is often appropriate for adhesive SBO, but surgical intervention is necessary when the obstruction is due to an internal hernia, as in this case.[1] When SBO is suspected, it is reasonable to consider LAGB-related complications first by taking out fluid from the LAGB. Urgent deflation of the band and nasogastric intubation may prevent gastric and bowel dilatation and consequent ischaemia. As depicted here nasogastric tube insertion can be difficult, even with a deflated band, and this can lead to bowel strangulation.[4] Some suggest the gastric band, if working, could be left in situ.[5] In our centre, if there is any complication with the LAGB, we have low threshold to remove it. In this case the band did not add any benefit to the patient's condition, and we opted to remove it. The fact the port was abnormally placed in the midline of the abdominal wall and the excessive LAGB connecting tube length were probably the reason for the loop formation that caused bowel obstruction.

CONCLUSION

With the declining use of LAGB worldwide, such rare complications are likely to become even less frequent. However, this case underscores the importance of considering LAGB-related complications in patients presenting with acute abdomen, even years after the initial procedure.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Catel L, Lefevre F, Lauren V, et al. Small bowel obstruction from adhesions: which CT severity criteria to research? J Radiol. 2003;84:27–31.
2. Furbetta N, Cervelli R, Furbetta F. Laparoscopic adjustable gastric banding: the past, the present, and the future. Ann Transl Med. 2020;8:117.
3. Smith MD, Patterson E, Wahed AS, et al. Thirty-day mortality after bariatric surgery: independently adjudicated causes of death in the longitudinal assessment of bariatric surgery. Obes Surg. 2011;21:1687-92.
4. Campbell NA, Brown WA, Smith AI, et al. Small bowel obstruction creates a closed loop in patients with a laparoscopic adjustable gastric band. World J Emerg Surg. 2019;14:20.
5. Sharma K, Arfan S, Thota SSP. Small bowel obstruction secondary to laparoscopic adjustable gastric band connecting tube intertwinement within the mesentery: a case report. Obes Surg. 2024;3:56-7.

Cite this article as: Caires FG, Nunes M, Flores P, Carvalhinha C, Caires AG, Loureiro R. Internal hernia secondary to laparoscopic adjustable gastric band connecting tube loop. Int Surg J 2025;12:206-7.