Intraluminal Gastric Band Migration Causing Small Bowel Occlusion

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To the Editor

The laparoscopic adjustable gastric banding (LAGB) was first described in 1993 as a safe and reversible procedure, becoming in the early 1990s one of the most common bariatric surgeries [1]. Currently, LAGB use has declined worldwide from 42.3% in 2008 to 0.8% in 2021 [2,3]. Gastric erosion from LAGB is a late complication occurring in 1.5–4% of cases [2,4]. As described by Egberts *et al*. [5], clinical manifestations can range from an asymptomatic picture (0.03%) to peritonitis or acute abdomen (5.8%). Complications can be classified as port/band-related issues (port site infection, band intolerance, system leak), weight loss failure (weight regain, lack of satiety, persistent hunger, cessation of weight loss), and others (epigastric or non-specific pain, peritonitis, abscess, dehydration). Moreover, port site infection is the most common presentation of gastric erosion [5,6].

We report a singular case of band erosion with jejunal migration causing acute small bowel obsruction. A 56-year-old Caucasian man had undergone Heliogast LAGB in 2021 at another bariatric center for a body mass index (BMI) of 37 kg/m^2. He was unable to report his nadir weight due to non-compliance with follow-up and dietary recommendations. At presentation, his weight was 117 kg, and he was taking metformin and simvastatin for glycemic and lipid control. In July 2023, the patient was admitted to our emergency department with nausea, vomiting, and intolerance to both liquids and solids, without clinical signs of bowel obstruction or port site infection. He was a heavy smoker (20 cigarettes per day) with no history of nonsteroidal anti-inflammatory drugs (NSAIDs) or alcohol use/abuse. Laboratory tests revealed no leukocytosis or anemia. An upper gastrointestinal (GI) contrast X-ray showed band slippage without signs of dilatation or obstruction. The LAGB was deflated, and intravenous (iv) therapy (normal saline 500 cc, metoclopramide 10 mg and pantoprazole 40 mg) was administered. Symptoms were resolved within six hours, and the patient was discharged with instructions to undergo an endoscopy and continue proton pump inhibitor (PPI) and antiemetic therapy. However, due to symptom resolution, he did not undergo the recommended endoscopy. In February 2024, he presented again with worsening symptoms, including abdominal pain and signs of intestinal obstruction persisting for five days. On examination, he had abdominal distension, tenderness, peritoneal irritation, and hyperperistalsis, without evidence of port site infection. Blood tests revealed elevated inflammatory markers (white blood cell (WBC) 13 × 10^9/L and C-reactive protein (CRP) 12 mg/L). An abdominal computed tomography (CT) scan demonstrated migration of the band into the jejunum, with dilated and congested bowel loops, but without free air or intra-abdominal effusion (Fig. 1), only 3 years after band place-

Fig. 1. CT showing migration of LAGB (white arrow). LAGB, laparoscopic adjustable gastric banding; CT, computed tomography.

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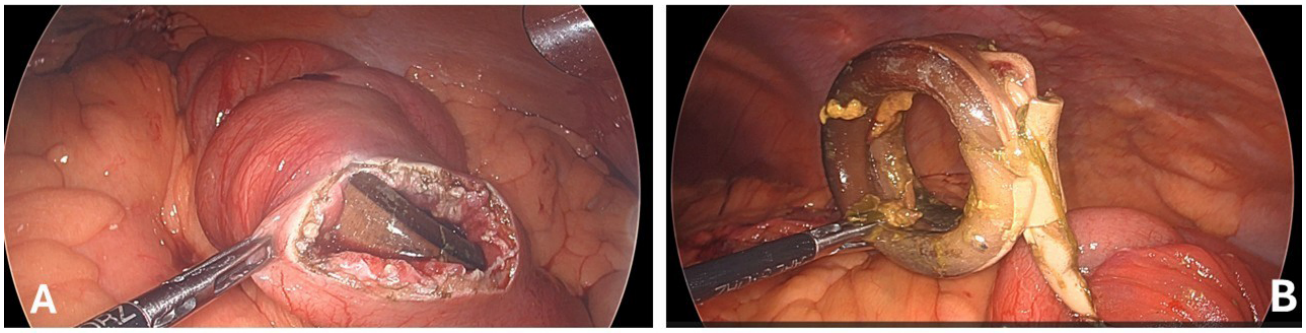

Fig. 2. Enterotomy (A) and band removal (B).

ment and without prior radiological or clinical evidence of gastric erosion. Given these findings, an emergency exploratory laparoscopy was performed. With the patient in the supine position, right abdominal access was obtained with a 12-mm optical trocar, and two operative trocars (5 mm and 12 mm) were inserted. Laparoscopy revealed a small amount of reactive pelvic free fluid and dilation of the stomach and proximal jejunum (first 25 cm) due to an intraluminal band. The catheter tube was cut and disconnected from the port, and an enterotomy was performed to remove the band and catheter completely (Fig. 2). A segmental bowel resection at the enterotomy site was performed, followed by a side-to-side isoperistaltic anastomosis. No gastric procedures were performed, as would be the case in endoscopic removal of band erosion. A pelvic drain was left *in situ*.

The postoperative course was uneventful. The patient was discharged on postoperative day 5 in good condition, tolerating a light diet and with normal bowel function. A contrast X-ray performed the day before discharge confirmed bowel patency.

In the literature, we identified only nine reported cases (5 females, 4 males) of band migration into the jejunum causing small bowel obstruction, with a postoperative interval ranging from 1 to 18 years. Abdominal pain, nausea, and vomiting were the most common presenting symptoms. In all cases, the diagnosis was established clinically and/or radiologically as band migration with small bowel obstruction. The laparoscopic approach was most frequently used for band removal.

Our case is noteworthy because the patient experienced band migration without clinical or radiographic signs of gastric erosion in less than six months, and only three years after band placement. In conclusion, LAGB gastric erosion and migration represents a rare and serious complication that can affect life expectancy and requiring treatment in devoted centers. Crucial remain the knowledge of this kind of complication and the understanding of the factors affecting its incidence. Laparoscopic treatment in expert hands is, as in all bariatric approaches and even in complication's treatment, the best option available.

Availability of Data and Materials

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to information that could compromise the privacy of research participants.

Author Contributions

AI, LM: conceptualization, data curation, formal analysis, investigation, methodology, project administration, software, writing—original draft. FDA, AM, GL, GC: conceptualization, resources, supervision, validation, visualization, writing—review & editing. All authors have been involved in revising it critically for important intellectual content. All authors gave final approval of the version to be published. All authors have participated sufficiently in the work to take public responsibility for appropriate portions of the content and agreed to be accountable for all aspects of the work in ensuring that questions related to its accuracy or integrity.

Ethics Approval and Consent to Participate

The research involving the use of human data/samples was approved by the Institutional Internal Review Board of Sapienza University (Approval No. 54721 of 5 December 2024). Informed consent for the use of their data/samples was obtained from the participant. The study follows the Declaration of Helsinki.

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Conflict of Interest

The authors declare no conflict of interest.

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