

## Small Bowel Obstruction due to the Impaction of an Intra-gastric Balloon

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### Abstract

### Case Report

We report the case of a 42 year old patient who was admitted to the emergency room for acute small bowel obstruction due to the impaction of an intra-gastric balloon, previously placed endoscopically for morbid obesity. The patient had surgical extraction through a laparoscopic enterotomy. No postoperative follow-up was noted. We performed an overall review of the results and complications of the endoscopic intra-gastric balloon as a therapeutic option in patients with severe obesity.

**Keywords:** Obesity Surgery, Balloon, Migration, Obstruction.

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## INTRODUCTION

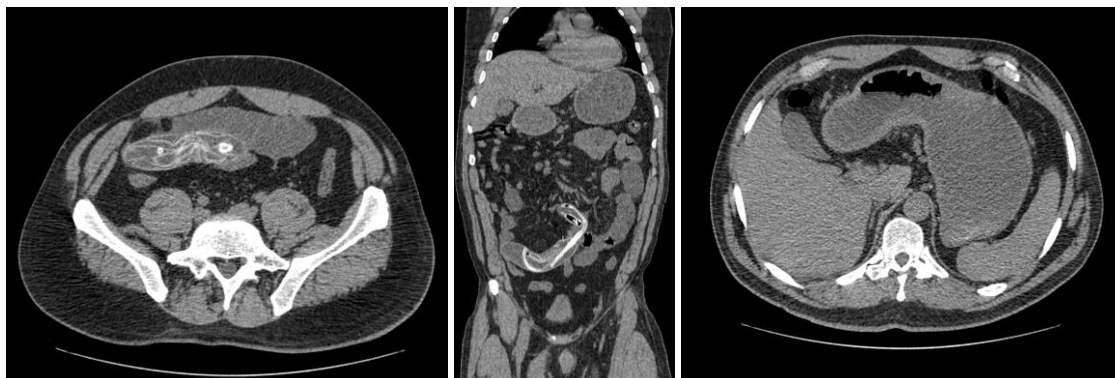
The intra-gastric balloon (IGB) represents a mini invasive endoscopic therapeutic option. However, the weight loss results remain unpredictable, especially in terms of durability. Complications such as small bowel obstruction due to balloon migration or irritation of the gastric wall have been reported [1]. We report a case of acute intestinal small bowel obstruction due to IGB migration into the jejunum.

## CASE REPORT

A 42 year old male was admitted to the emergency department with diffuse abdominal pain, nausea and vomiting with abdominal distension and inability to pass flatus. The interrogation found that the

patient had a gastric balloon placed endoscopically to reduce his obesity two years ago. Clinical examination noted a distended abdomen, hyper tympanic with light diffuse abdominal tenderness. The hernial orifices were free and the rectal ampulla was empty. The blood pressure was 110/80 mm Hg, and the heart rate was 76 beats per minute. The biological laboratory values were normal.

Abdominal and pelvic CT scan with intravenous contrast was performed showing a hyperdense ovoid structure in the small bowel, with an upstream intestinal dilation, thickening of the intestinal wall, and peritoneal reaction (Fig 1). We concluded to an enteric impaction of a deflated intra-gastric device causing small bowel obstruction.



**Figure 1:** 42-year-old male with small bowel obstruction caused by migrated, deflated intra-gastric balloon. CT scan shows the deflated balloon impacted in the small bowel with upstream bowel dilatation

The laparoscopic exploration eliminated any digestive perforation, located the IGB, then an enterotomy was performed. The balloon was extracted after emptying its residual liquid contents. The follow-up didn't note any complication, and the patient was discharged on day 3.

## DISCUSSION

Endoscopically placed intragastric balloons have been used to treat obesity for 30 years now [2]. The indications for the therapy include body mass index (BMI) > 27 kg/m<sup>2</sup> and inadequate weight loss associated with lifestyle modifications, medication and behavioral therapy [3]. It is also used to treat patients who have contraindications for surgical treatment, or prior to surgery as a bridge therapy, to achieve a better therapeutic effect [4].

It consists on introducing an elastic balloon into the stomach to create an "artificial bezoar" to reduce appetite, food intake, and induce weight loss. The placement of a IGB is relatively non-invasive and reversible, performed under endoscopic control [5]. Most authors recommend removal of the IGB six months after its placement, regardless of effectiveness and weight loss outcome. In our patient, the IGB has been placed 24 months ago. He had been properly informed of the need to remove the IGB at six months. However, he hoped to continue the weight loss.

The most frequently encountered symptoms after the placement of a IGB are non-specific and benign, such as nausea, vomiting, cramps, and abdominal pain in 10 to 90% of cases depending on the series, mainly during the first week. More serious complications such as gastroduodenal ulcers and gastric dilation are described more rarely [6].

A multitude of cases of IGB migration following rupture have been reported, causing complete or incomplete small bowel obstruction, and even colonic obstruction, requiring endoscopic or surgical extraction [6, 7].

## CONCLUSION

The intragastric balloon (IGB) is an endoscopic technique for the treatment of obesity, the long-term effectiveness remains to be evaluated. In practice, the IGB can currently be included in the therapeutic arsenal of multidisciplinary groups specializing in the management of obesity, as an alternative or preparation for bariatric surgery.

However, this technique does carry risks and complications, including surgical complications, as illustrated by our case of IGB migration.

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