Case Report

Intrajejunal migration of adjustable gastric band: a case report

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ABSTRACT: ***Introduction.*** Laparoscopic gastric banding is a first line bariatric procedure that is performed worldwide and can achieve substantial weight loss. Despite its many advantages, as the least invasive bariatric procedure, it has several complications like gastric prolapse, stoma obstruction and migration of the gatstric band. Rarely are these complications life threatening, but re-operation is usually the only treatment. ***Case presentation.*** We report a rare case of intrajejunal migration of an adjustable gastric band that was placed laparoscopically four years ago. ***Conclusion.*** Gastric band migration is a rather common complication of laparoscopic gastric banding, but intrajejunal migration is very rare and requires high clinical suspicion, close follow-up and thorough pre-operative investigation so as to avoid intraoperative surprises and retrieve the displaced gastric band safely.

KEYWORDS: *adjustable gastric band, gastric band complications, gastric band migration*

Introduction

The incidence of morbid obesity is showing a constant increase worldwide making it a major public health problem, due to its many life threatening co morbidities. As non operative treatments of this condition have a high rate of failure, bariatric surgery seems to be the only path for these patients so as to achieve an excess weight loss. Among the variety of restrictive and malabsorptive bariatric procedures, like Roux-en-Y-Gastric Bypass, laparoscopic adjustable gastric banding surgery is the most frequently used worldwide. It is the safest and the least invasive operative procedure that can be offered to patients with severe obesity, having many advantages like adjustability and reversibility. As with all major surgical procedures, complications associated with the placement of adjustable gastric band are unavoidable and require re-operation but they are rarely life threatening. The most common complications are gastric prolapse, stoma obstruction, esophageal and gastric pouch dilatation, access port problems, erosion and migration of the gatstric band.

The aim of this study is to report a case of an intrajejunal migration of adjustable gastric band that occurred four years after its placement.

Case presentation

A 45-year-old male patient (Fig.1) was admitted to our clinic for a scheduled removal of an adjustable gastric band that was placed in another centre four years ago.

Fig.1. Our patient (BMI: 49.13kg/m^2) after the removal of the migrated gastric band (9th post-operatively day)

According to our patient's history, the gastric band (Lap-band) was placed laparoscopically and his pre-operative BMI was 62.96 kg/m^2. At first, the gastric band was inflated with 2ml of saline, six months later with another 2ml of saline and six months later with another 2ml of saline. During the first eighteen months post-operatively, the patient managed to reduce his body weight by 40kg (BMI: 49.13kg/m^2). Specifically he lost 20kg during the first six months post operatively, 30 kg during the first year post operatively and a total of 40 kg during the first eighteen months post operatively. Since then, no significant decrease of his body weight was achieved. The patient did not report any other relevant symptoms, nor

suffered from other medical conditions, except from a mild hypertension. Laboratory findings were all within normal values.

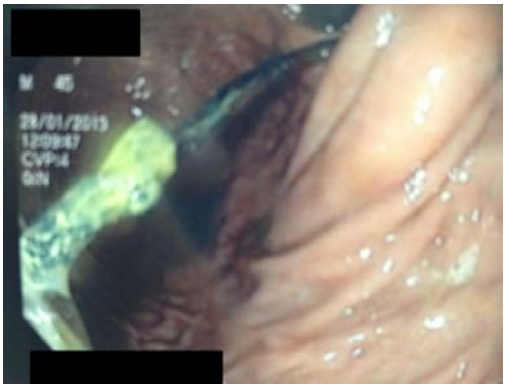

Fig.2. Upper gastrointestinal endoscopy revealing a part of the connecting tube into the gastric lumen

Upper gastrointestinal endoscopy was performed and surprisingly a part of the connecting tube was identified into the gastric lumen (Fig.2). CT scan was not performed, due to patient's increased body weight. Having this in mind, the patient was led to surgery, after complete deflation of the gastric band. During laparotomy, the gastric band was found fixed into jejunum's lumen, 110cm from the ligament of Treitz, causing obstruction, symphysis and jejuno-jejunal fistulae (Fig.3).

The suffering jejunum was resected (Fig.4) and a jejuno-jejunal latero-lateral anastomosis was made. No other bariatric procedure was performed at that time. The patient tolerated the surgery well and had an uneventful post operative period. He was discharged on the ninth post-operative day.

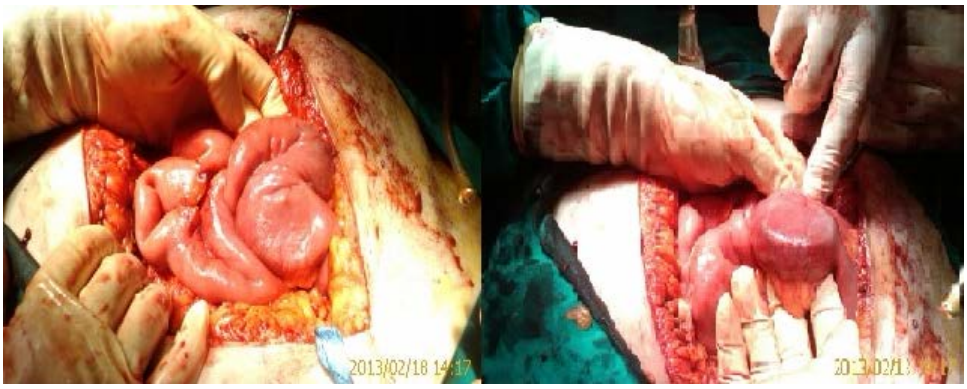

Fig.3. Intra-operatively identification of the gastric band, fixed into jejunum's lumen, 110cm from the ligament of Treitz, causing obstruction, symphysis and jejuno-jejunal fistulae.

Fig.4. Surgical specimen: Removal of displaced gastric band from jejunum's lumen

Discussion

According to the international literature, band migration's incidence ranges from 0.6% to 14.4%[1-4] and usually occurs anytime between 30-86 months postoperatively[5]. Erosion that leads to intragastric band migration is usually a slow, chronic process[6,7], where the band abrades constantly and slowly against the lumen and is eventually engulfed by the stomach, where it is exposed to gastric content[8]. Most patients have no symptoms and present only with non functioning gastric band, like in our case. In many cases the only sign of erosion and gastric band migration is an infection of the access port site so every patient with such sign should be investigated thoroughly. Nevertheless, erosion can sometimes be an acute life

threatening condition by causing gastric perforation, severe bleeding and obstruction. As these patients may present with signs of acute abdomen or hypovolemic shock, an emergency surgery is indicated.

Many hypothesis have been suggested regarding the causing factors of gastric band migration but the primary one is considered to be the pressure applied to the gastric wall. External pressure is applied either through chronic overfilling of the band[9], or the inclusion of too much gastric wall during the operation[10]. Internal pressure is applied as a result of excessive large food boluses early after operation. Other suggested causing factors in the literature are a rejection reaction against the gastric band[11] and chronic inflammation of the tissue area covered by the band[12].

Until recently, the only treatment of gastric band migration was re-operation. During laparotomy, a gastrotomy is usually made and the gastric band is identified and removed after its complete deflation. Band revision and simultaneous "rebanding" is not suggested in the literature because of high failure rates[13]. Recently endoscopic removal of gastric band, using a gastric band cutter, was proposed and it is currently the most frequently used therapeutic method regarding gastric band migration[14]. It can be implemented when the band migration is more than 50% of the circumference. As it is a non invasive method, it presents a very little possibility of complications and lower cost in relation to the open technique. In our case, laparotomy was our only option, as the gastric band was migrated and fixed into jejunum, causing obstruction and jejunojejunal fistulae, making the endoscopic removal of the band impossible.

Conclusion

Gastric band migration is considered to be a rather common complication of laparoscopic gastric banding and must be suspected in all cases of non functioning gastric bands, especially when an inflammation of the access point is reported. Endoscopic retrieval of displaced gastric band can be proposed depending on the stage of migration into the gastric lumen. Nevertheless, intrajejunal migration of adjustable gastric band is a very rare condition that only few surgeons have encountered. High clinical suspicion, close follow-up and thorough pre-operative investigation are essentials so as to retrieve the displaced band safely and minimize the danger of further complications.

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