Case Report

An Unusual Case of Significant Weight Loss Following Malposition of a Laparoscopic Adjustable Gastric Band

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Key Words

Laparoscopic adjustable gastric band • Weight loss • Malposition • Complications • Bariatric surgery

Abstract

Objective: Malposition or misplacement of gastric bands is a rare but recognised early complication of gastric band surgery. Malposition of the band would not normally result in significant weight loss after surgery. **Case Report:** To our knowledge, we report the first case in the English literature of a malpositioned gastric band encircling the pericardial fat pad only, who presented with delayed symptoms of dysphagia and gastro-oesophageal reflux resulting in significant weight loss (>60% of excess body weight) approximately 6 years after primary surgery. The patient underwent a water-soluble contrast study with antero-posterior views which was suggestive of a slipped band. However, on laparoscopy the band was found to be encircling the pericardial fat pad. **Conclusion:** We suggest that all contrast swallow studies for patients presenting with symptoms of gastric band slippage should include lateral views to exclude gastric band malposition, irrespective of the time of onset of symptoms after primary surgery.

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Introduction

Malposition or misplacement of gastric bands is a rare but recognised early complication of gastric band surgery [1]. Malposition of gastric bands causes early symptoms such as dysphagia or dyspepsia [2] and does not result in significant weight loss following surgery. To our knowledge, we report the first case in the English literature of a malpositioned gastric

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Fig. 1. Water-soluble contrast study.

band that presented with delayed symptoms of dysphagia and gastro-oesophageal reflux and resulted in significant weight loss (>60% of excess body weight) approximately 6 years after primary surgery.

Case Report

A 47-year-old morbidly obese woman had laparoscopic placement of an adjustable gastric band in another centre in September 2004 when her weight was 163 kg and her BMI was 55.8 kg/m² (height was 1.71 m). She presented in May 2010 with a 1-year history of progressive dysphagia and symptoms of gastro-oesophageal reflux.

On examination, she weighed 107 kg and her BMI was 36.6 kg/m². Physical examination was unremarkable, and her blood tests were normal. Prior to referral to our team, she underwent an oesophago-gastro-duodenoscopy (OGD) which was suggestive of a slipped band. A water-soluble contrast (Gastrografin®) swallow study with antero-posterior views showed a mildly dilated oesophagus with signs of uncoordinated peristalsis and a prominent gastric pouch, suggestive of slippage of the gastric band (fig. 1). No lateral views were performed at this stage.

She underwent a diagnostic laparoscopy with the intention of repositioning her gastric band. The gastric band was found to be placed anteriorly in the pericardial fat pad of the stomach and eroding into the left lobe of the liver. The stomach wall was healthy. The band was removed and the patient made an uneventful recovery. On follow-up at 4 months after surgical removal, she was well with complete resolution of her symptoms, although her weight had increased to 141 kg (BMI 48.2 kg/m²).

Discussion

Bariatric surgery is one of the fastest growing surgical specialties and has been shown to be the only effective treatment for morbid obesity [3]. Since the introduction of gastric banding in the 1990s, it has become a popular procedure for weight loss [4]. In 2008, it was the most common bariatric operation performed world-wide (42.3% of all procedures). Weight loss from laparoscopic adjustable gastric banding (LAGB) is variable, with an average loss of around 40% of excess body weight (range 38–58%) [5, 6]. Its popularity has been in part due to the minimally invasive nature of the procedure and the relative safety of LAGB when compared to other bariatric procedures such as laparoscopic Roux-en-Y gastric bypass or laparoscopic sleeve gastrectomy. However, the success of the procedure is highly dependent on the experience of the surgeon and careful post-operative follow-up. The overall complication rates are high (10–39%) [6], and complications may be related to the port (port dysfunction, tube breakage or port site infection), the band (band slippage, gastric erosion, hepatic erosion or pouch dilatation) or the operative procedure itself (port-site hernias).

Although gastric band slippage is a relatively common long-term complication of LAGB (range 1–20%) [7], malposition or misplacement of the gastric band is rare and reported less frequently in the literature. Mortelé et al. [8] found radiological evidence of gastric band malposition in 2.3% of cases. A retrospective study by Blanchet et al. [9] found a misplacement rate of 0.07%, with the most common site of malposition being the pericardial fat pad. The symptoms of malposition are indistinguishable from band slippage and cause gastric pouch and oesophageal dilatation leading to early symptoms of dysphagia and gastro-oesophageal reflux. Although this complication usually occurs either when the surgeon is inexperienced or when the patient is from a low-volume centre, 4 of the 5 patients from the study of Blanchet et al. [9] were from high-output centres. Also, no post-operative weight loss was observed in their study. Our case is unusual in that the malpositioned gastric band resulted in significant weight loss of almost 62.3% of excess body weight (absolute weight loss of 57 kg) with symptom onset approximately 5 years after the primary surgery. It is possible that her initial weight loss may have been in part due to a placebo effect. However, there is little evidence to support psychological therapies as an effective treatment for weight loss [10], and this would not explain why she developed symptoms of gastric obstruction 5 years post-operatively. It is most likely that external compression on the anterior stomach from the gastric band was the cause of her weight loss and delayed presentation of symptoms of dysphagia and gastro-oesophageal reflux.

In this case report, the malposition of gastric band was not recognised on the contrast study preoperatively due to the lack of lateral views and was only diagnosed intra-operatively on direct visualisation during laparoscopy. Four of the 5 cases in the study of Blanchet et al. [9] were identified using barium swallow studies with lateral views and the remaining patient by diagnostic laparoscopy. We suggest that all contrast swallow studies for patients presenting with symptoms of gastric band slippage should include lateral views to exclude gastric band malposition, irrespective of the time of onset of symptoms after primary gastric band surgery.

Conclusion

To our knowledge, this is the first case report in the English literature of a patient with a malpositioned gastric band who presented with delayed symptoms of dysphagia and gastro-oesophageal reflux that nevertheless resulted in significant weight loss (>60% of

excess body weight) approximately 6 years after primary surgery. All contrast swallow studies for patients presenting with symptoms of gastric band slippage should include lateral views to exclude gastric band malposition, irrespective of the time of onset of symptoms after primary surgery.

Disclosure Statement

The authors declared no conflict of interest.

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