Incidental oesophageal leiomyoma during laparoscopic Roux-en-Y gastric bypass: finding the unexpected does not affect outcomes

Mishank Jain, Laura Atherton, Vikas Acharya, Neel Sengupta, and Marco Barreca*

Department of General Surgery, Luton & Dunstable Hospital, UK

*Correspondence address. Department of General surgery, Luton & Dunstable Hospital, Luton, Lu4 0dz. Tel: +44-1582-718279; E-mail: marco.barreca@ldh.nhs.uk

Abstract

Most bariatric procedures are now performed laparoscopically. Here, we describe a case of incidental oesophageal leiomyoma found during laparoscopic Roux-en-Y gastric bypass (LRYGB). To our knowledge, this is the first such case reported. Our patient was admitted for an elective LRYGB. She had no upper gastrointestinal symptoms, and therefore did not undergo preoperative oesophagogastroduodenoscopy (OGD). During surgery, a hiatus hernia and an incidental oesophageal leiomyoma were found and treated with hernia repair and enucleation. The end outcome was unaffected. We were able to concomitantly treat the unexpected finding of an oesophageal leiomyoma and a hiatus hernia during the LRYGB. The routine use of OGD prior to bariatric surgery is still controversial. While surgeons should be prepared for unexpected pathologies, when performing laparoscopic bariatric surgery, a routine OGD prior to LRYGB is probably not necessary in asymptomatic patients. Laparoscopic enucleation of oesophageal leiomyoma during LRYGB is feasible and safe.

INTRODUCTION

Obesity is on the rise worldwide with a projected 65 million more obese adults in the USA and 11 million more obese adults in the UK by 2030. This will lead to an additional 6–8.5 million cases of diabetes, 5.7–7.3 million cases of heart disease and stroke, 492 000–669 000 additional cases of cancer and 26–55 million quality-adjusted life years lost for USA and UK combined [1].

With the increasing prevalence of morbid obesity, the number of bariatric procedures performed has also risen. Laparoscopy now represents the main approach for all bariatric procedures [2]. Coincidental findings of unexpected pathology are not uncommon, especially if preoperative investigations are not indicated by the patients’ history [3]. This study describes a case of an incidental oesophageal leiomyoma and a hiatus hernia found during laparoscopic Roux-en-Y gastric bypass (LRYGB).

CASE REPORT

A 58-year-old woman was admitted for an elective LRYGB. Her medical history included obstructive sleep apnoea (on regular continuous positive airway pressure ventilator), hypertension, hypercholesterolaemia, psoriatic arthritis and previous endometrial cancer (treated by hysterectomy). Her preoperative BMI was 40 and she was American Society of Anaesthesiologists physical status classification 3. There was no history of any upper gastrointestinal symptoms prior to admission or during pre-assessment.
The patient underwent an LRYGB during which an incidental hiatus hernia and a 40 × 30 × 20 mm stromal lesion extending from the distal oesophagus to the gastro-oesophageal junction became evident. These were coincidental finding prior to the definitive bariatric procedure being undertaken, and were both managed concomitantly.

Preoperative assessment included routine bloods and thyroid function tests, ECG and echocardiogram; all of which were within normal limits. This patient was asymptomatic and as per the departmental protocol for LRYGB, did not undergo preoperative oesophagogastroduodenoscopy (OGD; i.e. if the patient was undergoing a gastric sleeve operation, she would have had preoperative OGD to exclude Barrett’s oesophagus).

After dissection of the oesophago-gastric ligament and reduction of herniated stomach into the abdomen, the lesion in the distal oesophagus was identified (Fig. 1). It was enucleated leaving the oesophageal and gastric mucosa intact. The remainder of the procedure then continued as planned and was uneventful. The patient had no concerns postoperatively and was discharged home within 24 h. The lesion was sent for histopathological analysis and a plan for follow-up was organized.

Histopathological analysis of the lesion, including immunohistochemical profiling, revealed a well-circumscribed nodular tumour composed of smooth muscle cells with eosinophilic cytoplasm and spindle-shaped nuclei. The cells were arranged in interlacing fascicles with evidence of perinuclear vacuoles using haematoxylin and eosin staining. There was no evidence of necrosis, mitosis or significant nuclear pleomorphism. The specimen was negative for CD117 staining, hence excluding the possibility of a gastrointestinal stromal tumour. It was also negative for S100. However, stain was positive for smooth muscle actin (SMA) and desmin, which confirmed that specimen was of muscular origin. The histology therefore identified the lesion as a leiomyoma (Figs 2–6).

The patient was reviewed 6 weeks, 3 and 6 months postoperatively, and was making excellent progress. She had lost 33 kg in weight. There were no new or concerning upper gastrointestinal symptoms.

DISCUSSION

Benign tumours of the oesophagus are rare lesions. They constitute <1% of oesophageal neoplasms, with leiomyomas making up nearly two-third of these [4]. They are most common in...
incidental finding in our centre with an estimated 15% of bariatric patients being diagnosed with hiatus hernias at the time of the operation. The presence of a hiatus hernia in our experience does not compromise our management or approach used. Other common findings include oesophagitis, peptic ulcers and gastritis, but less likely in asymptomatic patients [8–10]. In our institution, we have adopted a selective use of gastroscopy in the work-up of patients undergoing bariatric surgery, performing gastroscopy only in patients with a clinical history positive for upper gastrointestinal symptoms.

Cases of leiomyomas found on OGD prior to bariatric surgery have previously been reported; however, there are no reports of incidental oesophageal leiomyomas found and excised during LRYGB.

The absence of a preoperative OGD did not change the end outcome for this patient and there were no associated complications. Hence, while it is important to be aware about the possibility of the presence of abnormal pathology when performing the operation, a routine OGD prior to gastric bypass surgery is not always necessary. The decision needs to be made using clinical judgement based on other indicative factors during preoperative assessment.

CONFLICT OF INTEREST STATEMENT

None declared.

REFERENCES

1. Wang YC, McPherson K, Marsh T, Gortmaker SL, Brown M. Health and economic burden of the projected obesity trends in the USA and the UK. Lancet 2011;378:815–25.
2. Buchwald H, Williams SE. Bariatric Surgery Worldwide 2003. Obes Surg 2004;14:1157–64.
3. Finnell CW, Madan AK, Ternovits CA, Menachery SJ, Tichansky DS. Unexpected pathology during laparoscopic bariatric surgery. Surg Endosc 2007;21:867–9.
4. Mutrie CJ, Donahue DM, Wain JC, Wright CD, Gaisser HA, Grillo HC, et al. Esophageal leiomyoma: a 40-year experience. Ann Thorac Surg 2005;79:1122–5.
5. Rijcken E, Kersting CM, Senninger N, Bruewer M. Esophageal resection for giant leiomyoma: report of two cases and a review of the literature. Langenbecks Arch Surg 2009;394:623–9.
6. Peromaa-Haavisto P, Victorzon M. Is routine preoperative upper GI endoscopy needed prior to gastric bypass? Obes Surg 2013;23:736–9.
7. Azagury D, Dumonceau JM, Morel P, Chassot G, Huber O. Preoperative work-up in asymptomatic patients undergoing Roux-en-Y gastric bypass: is endoscopy mandatory? Obes Surg 2006;16:1304–11.
8. D’Hont M, Steverlynck M, Pottel H, Ewelaut A, George C, Vansteenkiste F, et al. Value of preoperative esophagogastroduodenoscopy in morbidly obese patients undergoing laparoscopic Roux-en-Y gastric bypass. Acta Chir Belg 2013;113:49–53.
9. Zeni TM, Frantzides CT, Mahr C, Denham EW, Meiselman M, Goldberg MJ, et al. Value of preoperative upper endoscopy in patients undergoing laparoscopic gastric bypass. Obes Surg 2006;16:142–6.
10. Loewen M, Giovanni J, Barba C. Screening endoscopy before bariatric surgery: a series of 448 patients. Surg Obes Relat Dis 2008;4:709–12.