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Giant gastric lipoma presenting as GI bleed: Enucleation or Resection?

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ABSTRACT

INTRODUCTION: Gastric lipomas are unusual benign lesions and account for less than 1% of all tumours of the stomach and 5% of all gastrointestinal lipomas (Thompson et al.2003; Fernandez et al. 1983 [1,2]). Although predominantly asymptomatic and indolent; they may present with gastric outlet obstruction and upper gastrointestinal (GI) bleeding owing to size and ulceration. Only a few cases have been reported, presenting large in size with massive GI bleeding (Alcalde Escribano et al. 1989; Johnson et al. 1981 [3,4]).
PRESENTATION OF CASE: We report the case of a 62-year-old gentleman who presented to the emergency department with massive upper GI hemorrhage. He was initially resuscitated and stabilized. Later gastroscopy showed a large submucosal tumour (Fig. 1). Biopsy revealed adipose tissue. Computed tomography (CT) scan of the abdomen and pelvis showed a huge well defined oval soft tissue lesion measuring about 16 × 8 × 8 cm. The mass noted a homogenous fat density arising from the posterior wall of stomach with no extramural infiltration (Fig. 2). The tumour was completely enucleated through an explorative gastrotomy incision (Fig. 4).
DISCUSSION AND CONCLUSION: Massive bleeding secondary to a giant gastric lipoma is a rare finding of a rare disease. The majority of cases in the literature result in major gastric resection. Familiarity with its radiological findings and a high index of suspicion can lead to proper diagnosis in the acute setting. If malignancy is carefully ruled out, stomach preserving surgery is an optimal treatment option.

1. Introduction

Gastrointestinal lipomas are uncommon, slow growing benign tumours composed of mature adipose tissue surrounded by a fibrous capsule that can occur anywhere along the gut. Most are found in the colon, ileum and jejunum [5]. Lipomas found in the stomach are even more unusual, accounting for 2%–3% of all benign gastric tumours [6]. Most lipomas are found in the submucosa (95%), with a subserosal gastric lipoma being extremely rare. They are usually solitary and most commonly found in the antrum in 75% of gastric cases [7]. Although they are usually asymptomatic, it has been reported that a lipoma greater than 2 cm in size will present with abdominal pain more than 50% of the time. In previous studies, 37% of cases presented with either chronic or acute GI bleeding, obstruction, and dyspepsia [8,9]. The majority of large stomach lipomas that have been reported were treated by major gastric resection. We describe a case involving a giant gastric lipoma that presented with massive gastrointestinal bleeding and was managed by simple enucleation.

2. Case presentation

In our manuscript, we report the case of a 62-year-old gentleman, known to suffer from hypertension, who presented to the emergency department with a sudden episode of dizziness and syncope followed by hematemesis. He had a similar episode of upper gastrointestinal bleeding 5 years prior, where upper GI endoscopy documented a positive Helicobacter pylori induced gastric ulcer. He received triple therapy, and was then kept on long-term proton pump inhibitors. Recently the patient noted occasional post-prandial epigastric pain and fullness, associated with a weight loss of 10 kg over a span of six months. He denied any history of smoking or alcohol consumption.

On physical examination, the patient was tachycardic with a heart rate of 136, and had a blood pressure of 90/60. He was pale but conscious and orientated. Cardiovascular and respiratory examinations were normal. His abdomen was soft, non-distended, bowel sounds were present and no palpable masses were felt. His laboratory investigations showed a haemoglobin value of 6.3 g/dl and a haematocrit of 20%. The remainder of his blood investigations was unremarkable.

The patient was initially resuscitated and stabilized with intravenous fluids and three units of packed red blood cells. A naso-gastric tube was inserted which produced 500 ml of fresh blood,

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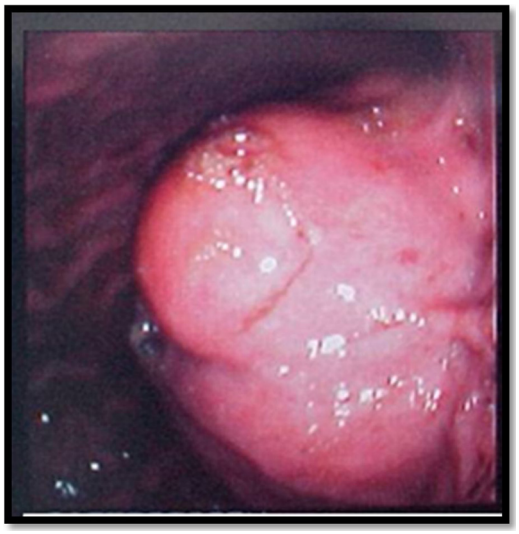

Fig. 1. Gastroscopy showing a large bulging submucosal mass.

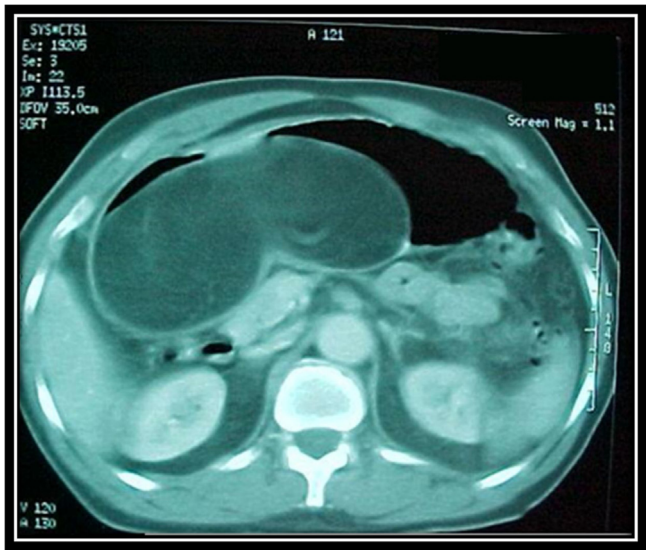

Fig. 2. CT scan showing a large well-defined oval shaped soft tissue lesion of fat density arising from the posterior wall of the stomach.

and was then admitted to the ward under close observation. The patient underwent an urgent upper GI endoscopy which showed a large bulging submucosal tumour extending from the gastroesophageal junction to the pylorus along the lesser curvature of the stomach with a 4 cm linear ulcer over the mass (Fig. 1). No active bleeding was seen during the procedure. Multiple biopsies were taken which yielded adipose tissue with no proliferative process. A CT scan of the abdomen and pelvis showed a $17 \times 9 \times 8$ cm well-defined oval shaped soft tissue lesion of fat density arising from the posterior wall of the stomach, with no associated lymphadenopathy (Fig. 2). The liver, spleen, and pancreas all appeared normal and tumour markers (CEA, CA 19.9) were within normal values.

Benign gastric pathology was suspected and the patient's case was discussed in a multi-disciplinary team meeting. The joint decision was to proceed with an exploratory laparotomy and resect the likely benign mass. A midline laparotomy was performed and the stomach appeared to be thin with a hard mass integrated in its wall. The stomach was incised at its body using a 10 cm incision and a huge submucosal mass was visualized with overlying ulcerated mucosa. It was well marginated, yellow in color, oval shaped, and

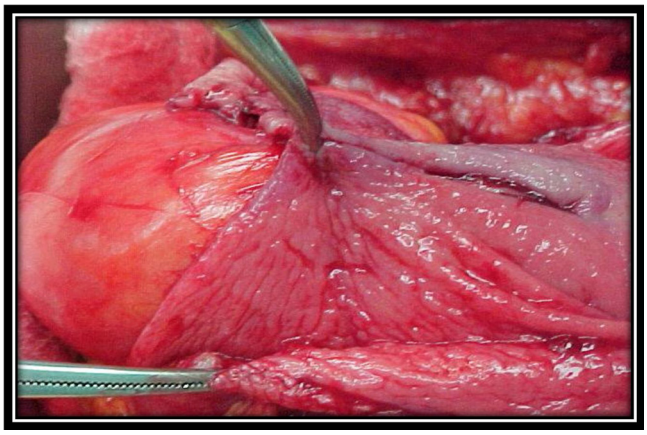

Fig. 3. Intraoperative finding of huge submucosal tumour.

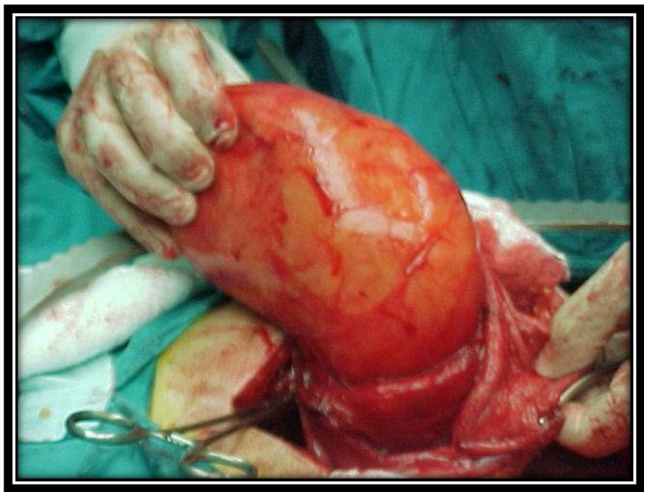

Fig. 4. Enucleation of the giant gastric lipoma.

firm in consistency (Fig. 3). The mass was easily dissected and enucleated (Fig. 4). The stomach was refashioned with primary repair. Histological examination was suggestive of a giant mural benign lipoma of the stomach with no mitotic activity or atypical cells. The overlying mucosa revealed chronic inflammation. His postoperative course was uneventful and a follow up gastroscopy in 3 and 6 months showed no abnormal findings.

3. Discussion and conclusion

Gastric lipomas are a location-specific subtype of gastrointestinal lipomas and represent rare benign mesenchymal tumours of the stomach. They are most prevalent between the fifth and seventh decades of life, and are found mainly in women [10]. They account for 1% of all tumors [1,2] and are usually found incidentally during routine endoscopy or during the investigative work-up for another pathology. Larger lesions however may cause a wide range of symptoms, from ulceration and bleeding which may cause hematemesis or melaena, to symptoms of early satiety, indigestion and may even cause gastric outlet obstruction. The differential diagnosis of a gastric lipoma includes peptic ulcer disease, stromal tumour, liposarcoma, fibroma, gastrointestinal stromal tumour or a glomus tumour [8,9].

Diagnosis can be established by CT scan, and confirmed with endoscopy and biopsy. In the past, prior to the availability of modern imaging modalities, the diagnosis was generally made after surgical resection [11,12]. Barium studies of extra-mucosal