Gastric lipoma: a rare cause of haematemesis

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ABSTRACT

Gastric lipomas are rare benign tumours of the stomach, representing less than 3% of all benign gastric neoplasms. They are usually asymptomatic but larger lesions can present with abdominal pain, gastric outlet obstruction and haematemesis. Malignant transformation is extremely rare. Accurate preoperative diagnosis can be established with computed tomography. Being benign, extensive surgery is not necessary and simple excision of the lesion is adequate. Small asymptomatic lesions can be followed up. We present a case of 80-year-old woman with gastric submucosal lipoma who presented with haematemesis.

KEYWORDS

Haematemesis – Gastric neoplasm

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Introduction

Lipomas are benign tumours that can occur in any organ system. In the gastrointestinal tract, lipomas are more common in the colon. Lipomas in the stomach are very rare, representing less than 3% of all benign gastric neoplasms. The clinical presentation of gastric lipoma depends on its size and location in the stomach. Small gastric lipomas are usually asymptomatic but large lesions can present with obstruction or bleeding. Being benign lesions, excision of the lesion with negative margins is sufficient and there is no need for a radical surgery. It is difficult, however, to differentiate lipomas from other extramucosal lesions in endoscopy. Since the lesion occurs in the submucosal plane, endoscopic biopsy would not yield correct diagnosis. Preoperative histological diagnosis can be established only with endoscopic ultrasound-guided fine needle aspiration cytology. Such facilities may not be easily available, especially in developing countries. Lipomas have a characteristic appearance on computed tomography (CT) with an attenuation value of minus 70 to minus 120 Hounsfield units (HU). Hence, a definitive diagnosis can be established with CT, which obviates the need for endoscopic ultrasound.

We present a case of gastric lipoma in a patient who presented with haematemesis, highlighting the role of CT in establishing the diagnosis.

Case history

An 80-year-old woman presented to the emergency department with two episodes of haematemesis and melaena. She had intermittent episodes of epigastric pain for two months

prior to admission. She was taking aspirin tablets regularly for the management of ischaemic heart disease. She had no previous episodes of gastrointestinal bleeding.

At presentation, her pulse rate was 108 beats/minute and her blood pressure was 140/80 mmHg. She was pale. Her abdominal examination was unremarkable. Melaena was noted on rectal examination. A nasogastric tube was secured, which drained altered blood. Her haemoglobin was 7.6 gm/dl, the total white cell count was 8640/mm³ and platelet count was 2.4 lakh/mm³. Her international normalised ratio, renal and liver function tests were within normal limits. She was given a packed red blood cell transfusion. Oesophagogastroscopy was performed, which showed a smooth bulge in the posterior wall of the antrum of the stomach with an ulcer at the summit of the swelling. There was no active bleeding. Multiple biopsies were taken from the edge of the ulcer. Histopathological examination of the endoscopic biopsy revealed gastric mucosa with chronic inflammation. A contrast-enhanced CT of the abdomen demonstrated an 8 × 3 cm submucosal lesion in the posterior wall of the antrum of the stomach (Fig 1). The lesion was solid, not enhancing and had uniform fat density (HU –70), suggestive of lipoma of the stomach. At laparotomy, we found a soft lobulated swelling in the posterior wall of stomach (Figs 2 and 3). The seromuscular layer of the stomach was opened and the lipoma was excised, together with part of the overlying mucosa which had ulcerated (Fig 4). The gastrotomy was closed in two layers. The patient had an uneventful postoperative recovery. Histopathological examination of the excised specimen showed features of benign lipoma. She had no evidence of recurrence or gastrointestinal bleed two years after surgery.

Figure 1 Contrast-enhanced computed tomography demonstrating a well-encapsulated extramucosal lesion with low attenuation in the antrum of the stomach (yellow arrow)

Figure 3 Enucleation of the lipoma after opening the seromuscular layer of the stomach

Figure 2 Lipoma in the posterior wall of stomach

Figure 4 Enucleated gastric lipoma with overlying ulcerated mucosa

Discussion

Lipomas are popularly known as ‘universal tumours’ because of their tendency to occur in all organ systems. In the gastrointestinal tract, lipomas tend to occur in the sub-mucosa and, rarely, in subserosa.¹ They are more common in the colon, followed by the small intestine and then the stomach. Gastric lipomas are relatively rare, representing less than 3% of all benign gastric neoplasms.² In the stomach, lipomas are more common in the antrum. They are usually small, slow growing and asymptomatic. But large gastric lipomas (greater than 4cm) can present with varied symptoms such as abdominal pain, abdominal mass, dyspepsia, gastric outlet obstruction and haematemesis. The most common clinical manifestation of gastric lipoma is gastrointestinal haemorrhage, which occurs in 50% of cases.³ The bleeding occurs due to the ulceration of the overlying mucosa. Malignant transformation of the lipoma is extremely rare.³

Owing to the extramucosal location, it is difficult to diagnose gastric lipoma during endoscopy. There are few endoscopy findings such as the Cushing sign (indentation of the mass by application of pressure with biopsy forceps) and the tenting sign (the mucosa overlying the mass can be moved freely with the biopsy forceps), which may indicate the

possibility of a gastric lipoma. A definitive diagnosis of gastric lipoma is not possible, however, solely with endoscopy and endoscopic biopsy. Endoscopic ultrasound-guided fine needle aspiration cytology is the ideal investigation for diagnosing gastric lipoma but it may not be easily available. CT helps to differentiate gastric lipoma from other extramucosal tumours based on the radiodensity of the lesion. Gastric lipomas have well-defined borders and are less radiodense (HU ranging from -70 to -120). In contrast, other extramucosal lesions (for example, gastrointestinal stromal tumour/lymphoma) appear radiodense at greater than 20 HU. Thus, a well-defined homogenous mass with low density on CT is diagnostic of lipoma.⁴

In the past, diagnosis of gastric lipoma is achieved only after histopathological examination of the excised specimen and most of the patients had undergone extensive surgery for this benign condition.⁵ But with the advent of CT and endoscopic ultrasound, gastric lipomas can be diagnosed preoperatively. Simple excision of the lesion is adequate. There is no need to perform extensive resection. Small polypoid lesions can be excised endoscopically.⁵ Small asymptomatic lesions can be followed up without intervention. Some

surgeons have advised surgery for lesions larger than 4 cm, even if asymptomatic, as complications are more common in lesions greater than 4 cm.

To conclude, gastric lipomas are rare benign tumours of the stomach. Definitive preoperative diagnosis can be established with CT. Simple excision of the lesion is adequate and recurrence rates are low.

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