CASE REPORT

Two cases of rare benign mucosal lesions of the stomach

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SUMMARY

Gastric lipomas are rare benign mesenchymal tumours comprising 3.2% of all gastrointestinal lipomas. Most patients are asymptomatic and the symptoms depend on the size and location of the mass. The patient may present with bleeding due to ulceration of the overlying mucosa, rarely obstruction and intussusception. We present two such rare mass lesions of the stomach presenting with bleeding symptoms.

BACKGROUND

Gastrointestinal (GI) lipomas are rare lesions and gastric lipomas account for 3–5% of all these tumours and fewer than 1% of all gastric tumours.¹ They typically occur in the fifth or sixth decade of life with equal sex incidence.¹ Rarity of these lesions prompted us to report our experience with two patients with gastric lipomas who presented with symptoms related to a gastric mass and diagnoses were established on resected specimens.

CASE PRESENTATION**Case 1**

A 56-year-old woman of Asian Indian origin presented with easy fatigability and black coloured stools for 4 weeks. She did not have any other symptoms relating to upper GI tract (GIT) like abdominal discomfort, dysphagia, loss of appetite or fullness even after meals. She did not report of any significant weight lost. She was a vegetarian. Her past and family history was unremarkable. On clinical examination, she was found to be anaemic with no other abnormality.

Case 2

A 47-year-old woman, of Asian Indian origin, presented with pain in the abdomen for 10 days and a history of passing black coloured stools for 5 days. She did not have any other symptoms relating to upper GIT like abdominal discomfort, dysphagia, loss of appetite or fullness even after meals. She did not report of any significant weight loss. She was a vegetarian. Her past and family history was unremarkable. Clinical examination revealed no abnormality.

INVESTIGATIONS**Case 1**

Haemoglobin was 7.2 g% with normal total and differential counts, and other biochemical parameters. Upper GI endoscopy revealed a submucosal mass just below the gastro-oesophageal junction reaching upto the incisura and involving the

anterior wall and lesser curvature of the stomach. The overlying mucosa appeared normal. The gastric capacity appeared not to be compromised by the submucosal lesion. Contrast enhanced CT (CECT) scan performed after 2 weeks revealed a well encapsulated submucosal mass measuring 9 cm in longitudinal diameter present along the lesser curvature with a minimal luminal projection. The luminal surface of the mass showed 2×2 cm size ulcer with everted margins. A diagnosis of large ulcerated gastric lipoma was made.

Case 2

On upper GI endoscopy showed three 2 mm sized superficial gastric mucosal erosions along the greater curvature towards the pylorus. The mucosa in this region appeared elevated due to mucosal oedema. The mucosa otherwise was smooth, glistening, soft and compressible but not indurated. Mucosal biopsy taken from this region histologically showed features of a moderately heavy chronic mucosal inflammation with gastric foveolar hyperplasia, no evidence of *Helicobacter pylori* infection. CECT was carried out to ascertain the cause for the elevated mucosa, which showed a well-defined polypoidal mucosal lesion of about 3 cm along the greater curvature involving the pylorus. The polypoidal mass had a soft tissue and fat density. There was no other extra gastric streakiness or enlarged perigastric lymph node. A diagnosis of gastric lipoma was suggested.

DIFFERENTIAL DIAGNOSIS

Benign gastric polypoidal lesion was likely to be lipomatous polyp in both cases.

TREATMENT**Case 1**

The mass was subsequently excised by anterior gastrotomy. The excised mass was composed of a 12×10 cm encapsulated soft mass bearing 3×2 cm ulcer at the centre (figure 1) and a feeding vessel at the base. Frozen section suggested diagnosis of lipoma. To rule out any other underlying concomitant pathology, the mass was resected along with the gastric wall. The resected specimen revealed a large soft glistening yellow submucosal mass with a fairly deep 3 cm sized ulcer and a feeding vessel coursing through the ulcer. Histology confirmed a diagnosis of a benign ulcerated gastric submucosal lipoma. There was no lipoblasts, mitoses or necrosis.

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Figure 1 Gross photograph showing an encapsulation and lobulated mass with a large haemorrhagic ulcer at the centre with everted margins and yellow coloured fat could be seen through the ulcer.

Case 2

The patient was treated with laparotomy. Through gastrotomy, a broad-based gastric polypoidal mass measuring 3 cm in diameter was identified along the greater curvature towards the pylorus. The mass was resected with a thin rim of surrounding normal gastric mucosa. On cutting through the mass, the mucosa covered polypoidal mass was composed of glistening yellow coloured lobulated fatty tissue. Histopathological examination confirmed the mass to be a lipoma with no cellular atypia (figure 2A,B).

Figure 2 Low power photomicrograph of the polyp showing the hyperplastic gastric mucosa overlying the fibrocollagenous tissue capping the superficial portion of the lipoma (H&E, ×4; A). The lipomatos component composed of mature fat cells intermixed with fibrocollagenous tissue (H&E, ×10; B).

OUTCOME AND FOLLOW-UP

Postoperatively, both the patients were discharged on seventh postoperative day and follow-up at 3 and 6 months are satisfactory.

DISCUSSION

Gastric lipomas constitute less than 3% of benign gastric tumours.¹ Owing to its rarity, which account for ~3% of all GI lipomas, there are only a couple of case reports of gastric lipomas in the English literature. Commonest site reported is the antrum whereas lipomas of cardia and pylorus are seen less frequently.²⁻³ Similar to lipomas in other sites in GI tract, 90% of gastric lipomas are submucosal and the rest are seen in subserosa.⁴⁻⁵ The precise aetiology still remains unknown, and it has been suggested that it might be related to embryological sequestration of adipocytes, or it may be just a natural process of ageing.⁶ Occurrence of symptoms depends on size and location of the mass; a lesion less than 2.0 cm usually is asymptomatic where as larger lesions may have one or more of the following, haemorrhage, abdominal pain, pyloric channel obstruction and dyspepsia. Rarer symptoms include diarrhoea and constipation as the result of subacute obstruction, and intussusceptions.⁷⁻⁸ Haemorrhage is secondary to ulcer and central necrosis developing as the result of contact of the lipoma with opposing wall.⁴ Single lipoma of the GIT has never been reported with malignant transformation. Exceptions are multiple lipomas, lipomatosis and coexistence of lipoma with gastric carcinoma.¹ Treatment modalities for gastric lipomas have changed with the advancement in endoscopic and imaging techniques.¹ Incidental lipomas are not being treated as there is no risk of malignant transformation. Less than 6 cm sized mass with endoluminal or extraluminal protrusion are treated by laparoscopic resection.²⁻⁷ Surgical excision is indicated in symptomatic patients with clinical evidence of upper GI bleeding and in those patients where a diagnosis of gastric malignancy is suspected.⁷

The endoscopic character of gastric lipomas typically is soft, sharply defined, submucosal mass, often exhibiting yellow colour opposed to pink gastric mucosa. There are three important clues to identify lipoma on endoscopic examination, a tenting sign in which the overlying mucosa is easily retracted with the biopsy forceps; cushion sign where the forceps produces a soft, cushioning indentation when applied to the lipoma; and the naked fat sign which refers to exposed adipose tissue on the surface when poked through the normal overlying mucosa or after biopsy has been performed.⁹ Both patients in the present report showed soft and compressible submucosal mass lesion on endoscopy. The lesions may have centrally located ulcer. Our first patient showed a large centrally located ulcer through which the yellow coloured fat could be visualised. Endoscopic ultrasound examinations (EUS) has been documented as a good method for the diagnosis of gastric lipoma and the typical findings of EUS reveal the tumour as a hyperechoic neoplasm in the submucosal layer.¹⁰ EUS was not performed in both the patients.

The indication for open surgery in the two index patients were (i) occult GI bleed resulting in anaemia in a large ulcerated lipoma and (ii) occult GI bleed due to erosions, which healed by the time the patient underwent surgery and persistent unexplained abdominal pain, and the possibility of development of outlet obstruction in the future, if not removed.

Here, we reported two cases of bleeding benign gastric lipomas in female patients of Asian Indian origin, with no significant family history or any other associated medical condition.

Learning points

- ▶ Benign gastric polyps though rare should be considered in the differential diagnosis of any gastric submucosal mass lesions.
- ▶ Clinical presentation with upper gastrointestinal bleed appears to be the commonest presenting symptom.
- ▶ As these lesions are located in the submucosa, overlying gastric mucosa may appear normal and exhibit changes of chronic inflammation in endoscopic biopsy.

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Patient consent Obtained.

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