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Case Report

Gastric lipoma: a rare cause of upper gastrointestinal bleed

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ABSTRACT

Lipoma is a rare mesenchymal tumour of stomach (less than 1% of gastric tumours) to present as gastrointestinal bleed. We report a case of upper gastrointestinal bleed from a gastric lipoma in a 42 year male patient who underwent distal gastrectomy for resection of the large submucosal tumour situated in antropyloric region. Most common age of presentation of gastric lipoma is fifth or sixth decade of life and most of these are located in submucosal plane (90% cases) and in antropyloric region (75% cases). Gastric lipomas can be diagnosed by endoscopic means but most often with CT scan which shows characteristic fat attenuation. Small asymptomatic incidentally diagnosed can be safely observed while larger symptomatic tumours are treated by endoscopic or surgical resection which offers cure from this benign lesion.

Keywords: Distal gastrectomy, Gastric lipoma, Gastrointestinal bleed, Naked fat sign, Submucosal tumour of stomach

INTRODUCTION

Gastric submucosal tumours are rare cause of upper gastrointestinal (GI) bleed. Most common of it are mesenchymal tumours like leiomyoma, gastric submucosal tumours. Lipoma is a rare mesenchymal tumour of stomach (less than 1% of gastric tumours) to present as GI bleed.[1] Most gastrointestinal lipomas are located in the colon, ileum, and jejunum as compared to stomach and are rarely responsible for clinical symptoms. We report a case of upper gastrointestinal bleed from a gastric lipoma.

CASE REPORT

A 42 year male patient with no comorbidities, a non-smoker non-alcoholic, presented with 10 days history of melena, lethargy, dyspnoea on exertion with no abdominal pain or distension, no hematemesis, no jaundice and no similar complaints in the past. Physical examination was unremarkable except for the melena on per rectal examination. His blood investigations showed severe anaemia of haemoglobin 6.9 g/dl on admission, normal renal and liver function tests and normal coagulation profile. Patient received 3 units of packed cells transfusion and haemoglobin corrected to 9.6 g/dl and relieved of lethargy and dyspnoea. Upper GI endoscopy revealed a large submucosal lesion in the antrum of stomach extending up to pyloroduodenal orifice with ulceration of overlying mucosa and protrusion of fat (Figure 1). Biopsy was not taken in view of characteristic CT imaging features. Contrast enhanced CT scan of abdomen showed a non-enhancing fat containing lesion 6.4 cm × 4.8 cm × 2.1 cm in antropyloric region of stomach (Figure 2). Patient was assessed for surgery under ASA PS 2, and underwent laparoscopy assisted distal gastrectomy with gastrojejunostomy and jejunojejunostomy in view of its location close to pyloric end of stomach. Specimen showed a smooth submucosal yellow lobulated mass with ulceration over its mucosal covering (Figure 3).

Figure 1: Endoscopic image 'naked fat sign'.

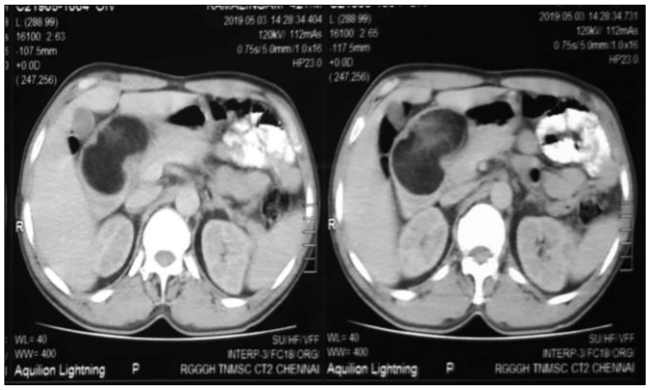

Figure 2: Contrast enhanced CT scan of abdomen showed a non-enhancing fat containing lesion in antropyloric region of stomach.

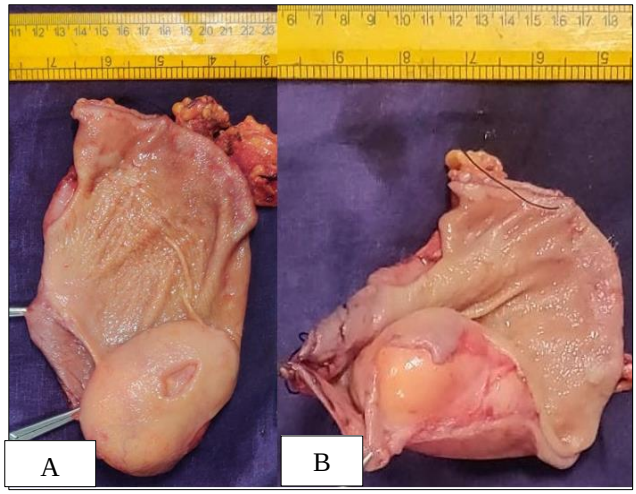

Figure 3: (A) Submucosal tumour with mucosal ulceration (B) submucosal tumour is a yellow smooth lobulated lesion consistent with lipoma.

Microscopic examination of the specimen demonstrated gastric mucosa with a well-defined neoplasm in the submucosa composed of lobules of mature adipocytes interspersed with fibrovascular septa and scattered lymphocytes consistent with gastric submucosal lipoma (Figure 4). Postoperatively patient recovered uneventfully and discharged with no complaints.

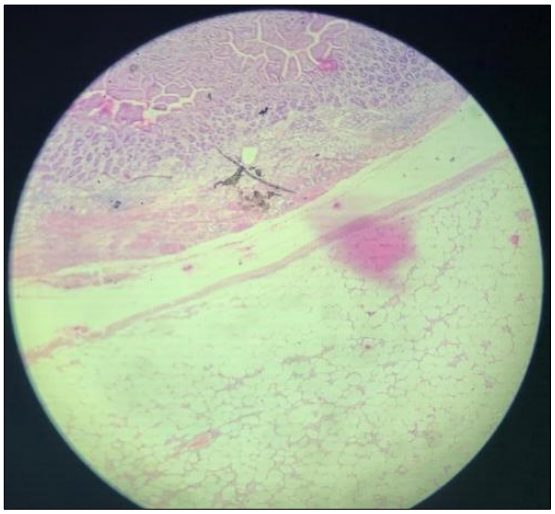

Figure 4: Gastric mucosa with well-defined adipose tumour in the submucosa.

DISCUSSION

Gastric lipomas are rare mesenchymal tumours that contribute to less than 1% of all gastric tumours and only 5% of gastrointestinal lipomas.[1] Common age of presentation is fifth or sixth decade of life.[1,2] Gastric lipomas appear as soft, smooth, discrete, solitary tumours and appear yellow and adipose when transected.[1] Microscopically, gastric lipomas consist of well-differentiated adipose tissue surrounded by a fibrous capsule.[2] In the stomach, lipomas are distributed most often in the antrum (up to 75%) and located in submucosal plane (up to 90%).

Most of these are asymptomatic and incidentally found on investigations done for other complaints. Symptomatic gastric lipomas are often large (usually >2.0 cm) in size. Symptoms may include abdominal pain, diarrhoea, constipation, or gastrointestinal haemorrhage or gastric outlet obstruction.[1,3] Ulceration with necrosis and inflammation of overlying mucosa may occur leading to GI haemorrhage.

Characteristic endoscopic appearance of gastric lipoma includes three signs namely tenting sign, cushion sign and naked fat sign which are easily retractable mucosa over the tumour with biopsy forceps, soft cushioning indentation when pressed with biopsy forceps and exposed fatty tissue on the surface of lipoma when mucosa was removed by multiple prior biopsies respectively.[4] Endoscopic ultrasound guided is capable of determining the nature of a lesion based on the originating layer, size, and internal echoes of the lesion. Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) plays a key role in distinguishing lipoma

from other mesenchymal submucosal tumours of stomach like GIST, leiomyomas.[5]

Gastric lipomas have a characteristic radiological appearance on CT scan which is diagnostic when the attenuation values of -70 to -120 HU is found indicating the fat content of the tumour. Gastric lipoma when >2 cm in size and characteristic imaging features, biopsy can safely be omitted.[6] On CT, when linear strands of soft-tissue attenuation at the base as well as ulceration of the mucosa were found, that correlated with prominent fibrovascular septa.[2]

Incidentally diagnosed small asymptomatic gastric lipomas are best managed by observation. Surgical resection remains the treatment of choice for symptomatic lipomas. Endoscopic submucosal resection is an attractive treatment option for gastric lipomas <2 cm in diameter when expertise is available.[8] Larger tumours are resected either laparoscopically or by open laparotomy. Enucleation is also a treatment option when the tumour is located in the body of the stomach or in the subserosal location.[7]

CONCLUSION

Gastric lipoma is a rare but surgically curable cause of upper gastrointestinal bleed when large in size and hence making it essential for surgeons to be aware of the possibility of a benign lesion to produce alarming symptoms.

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