Giant Gastric Lipoma Presenting with Fever and Melena

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Abstract
A forty year old male presented with melanoctic stools, fever and pallor of two weeks' duration. A large submucosal gastric tumor with ulcers on its surface was found on endoscopy and radiology. Endoscopic biopsies showed adipose tissue on histology which was confirmed after resection. No other cause of fever could be found. This may be the largest sized gastric lipoma reported (18 cm × 10 cm × 10 cm) and the third to be diagnosed on biopsy preoperatively. The importance of taking biopsies from the ulcer base is emphasized.

Key Words: Gastric Lipoma, lower gastrointestinal bleed, fever.

Introduction
Lipoma comes next to leiomyoma among non-epithelial benign tumors of the stomach. It is known to present with acute or chronic gastrointestinal (GI) bleeding, pain, gastric outlet obstruction and dyspepsia. Pyrexia as a symptom, unlike in malignant tumors, has not been described in benign tumors like lipoma, of which about 202 cases have been published. In spite of their size, these tumors are usually not palpable. Due to their submucosal location endoscopic biopsies do not help in pre-operative histological diagnosis. We report here a case with the following interesting features: (a) giant size tumor, (b) fever as a presenting feature, (c) massive lower GI bleeding without hematemesis, (d) radiological air contrast tumor delineation, and (e) histological diagnosis by endoscopic biopsies preoperatively.

Case Report
A forty year old male farmer, apparently well 15 days prior to admission, suddenly started passing black stools. He developed high grade fever with chills 2 days later. He was treated with antibiotics and antibiotics. Fever and tarry stools however continued. He developed progressively increasing pallor and weakness in spite of nine units of blood and was referred to the Nehru Hospital, Chandigarh. There was no history of abdominal pain, vomiting, hematemesis or jaundice.

Physical examination revealed a well-built male patient with marked pallor. His blood pressure was 100/70 mm Hg, pulse rate 106 per minute, temperature 39°C. The abdomen was soft, non-tender, with no palpable mass. The initial diagnosis considered were either enteric fever with gastrointestinal bleed or a silent duodenal ulcer bleed with fever of separate etiology. There was no anastomotic stoma. After initial resuscitation, upper GI endoscopy was performed.

Endoscopy revealed a huge, polypoidal tumor with a smooth surface in the body of the stomach along the greater curve. The lumen was seen as a chink along the lesser curve after air insufflation. The lower half of the tumor near the antrum had multiple small superficial ulcerations which ooed slowly. Multiple biopsies were taken from the base of these ulcers. The antrum contained 80 to 100 ml of dark red blood. The endoscopic impression was of a submucosal gastric tumor, most likely a leiomyoma. The duodenum was normal.

Hemoglobin was 4.9 g/dl; total leucocyte count 16,100/mm³ with 83 percent neutrophils. Investigations for etiology of fever, namely, malarial parasites, blood and urine cultures, Weil test, Mantoux test and X-ray chest were all negative. Plain X-ray abdomen after air insufflation showed a large mass along the greater curvature in the body of the stomach (Fig 1). Air-contrast study delineated the tumor; the duodenum and the rest of the small bowel were normal. The histology of the endoscopic biopsy showed inflammatory exudate and a single bit of mature adipose tissue.

At laparotomy a large, smooth mass occupying the whole of the body and part of the antrum of the stomach was found. Multiple small ulcerations were present over its lower portion. There was no serosal involvement. As the pedicle of the lesion was wide, subtotal gastrectomy and gastrojejunostomy were performed. Grossly the specimen weighed 1800 g and the polypoidal mass measured 18 cm × 10 cm × 10 cm. The cut surface was yellowish and microscopically it showed encapsulated tumor composed of mature adipose cells (Fig 2). There was no evidence of any cellular pleomorphism.

On the third post-operative day, the patient became afebrile and was discharged 2 weeks later. On follow-up visits, he has been asymptomatic for one year.

Fig 1: Air contrast study of stomach showing a large, smooth, polypoidal tumor along the greater curvature of the stomach.
Figure 2: Microphotograph showing mature adipose cells with capsule on one side.

Discussion

Gastric lipomas have four major symptoms, namely, hemorrhage (53%), abdominal pain (37%), pyloric obstruction (33%) and dyspepsia (26%).

Stomach lipomas tend to reach large dimensions before they become symptomatic. Presentation as a peptic ulcer has been emphasized recently. Exogastric lipomas have produced symptoms from traction, torsion, adherence to other structures and from peritoneal thickening over inflamed areas of the tumor. Fever as a presenting feature has not been reported. Since fever and bleeding in our case started nearly together and fever subsided within 48 hours of tumor resection and did not recur on one year follow-up, we suggest a causal relationship between fever and the tumor. Moreover, investigations for the usual causes of fever were negative. It is also possible that surface tumor necrosis due to pressure, a well known feature of such tumors, was responsible for fever in our patient.

Even though a large amount of altered blood was present in the antral part of the stomach on endoscopy, this patient had no hematemesis. The nasogastric tube was unable to go across the obliterated lumen level. Presumably this tumor was acting like a 'ball valve' at the gastroesophageal junction, preventing hematemesis.

Schindler described the endoscopic features of benign submucosal gastric lesions. He emphasized the sharply defined and smoothly elevated lesion with a broad base and frequently a deep, centrally located hemorrhagic ulceration. The finding of gastric folds reaching towards the surface of the lesion, "bridging folds", was considered to be strong evidence for a benign submucosal pathology. The ulcers in these tumors are secondary to pressure necrosis of overlying mucosa and occur in one third of benign gastric neoplasms. On endoscopy our first diagnostic impression was ulcerated leiomyoma as has been the case with other authors.

Histological diagnosis of submucosal lesions is rarely obtainable short of a laparotomy. Two cases of submucosal lipoma could be diagnosed by biopsying the base of an ulcer produced by electrocoagulation of the tumor. In our case, one of the biopsies taken from the ulcerated sites showed, besides necrotic tissue, an area of adult adipose cells. Therefore in such tumors a biopsy from the base of pre-existing ulcer or 'stacked endoscopic biopsies', that is multiple biopsies taken at the same site in a drilling fashion, can help in their pre-operative histological diagnosis.

The submucosal tumors can be diagnosed by barium examination of stomach because of their sharp well defined margins and smooth outline. Under fluoroscopy, due to their pliability they show change in configuration with peristalsis and compression "sliding movement". The combination of air contrast and low K-V exposure allows its identification. Recently, computed tomography, by showing uniformly low attenuation indicating fat content, has been used in the preoperative confirmation of diagnosis of such benign gastric tumors.

References