Primary gastric tuberculosis causing gastric outlet obstruction: A case report

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Abstract:

Ileo-caecal junction is the most common site of abdominal tuberculosis. Isolated primary gastric tuberculosis is very rare. Our case was a 44-year-old female with complaints of vomiting and epigastric distension after meals since 18 months. There was no other positive history. Her gastroscopy revealed pyloric stenosis with 5-6 ulcers in pre-pyloric region which were thought to be stasis ulcers. A distal partial gastrectomy with Roux-en-Y gastro-jejunostomy was done. The histopathology of the specimen revealed caseous necrosis with epitheloid granulomas and Langhan's giant cells which gave the diagnosis of tuberculosis. Patient was registered under Category I of Directly Observed Treatment, Short-course.

Keywords: Gastric tuberculosis, Caseous necrosis, Langhan's giant cells.

Introduction:

Gastric tuberculosis is extremely rare (1-2), usually developing secondary to pulmonary tuberculosis or in association with an immune-deficient condition. Primary gastric tuberculosis in immune-competent individuals has been reported. Clinically it resembles peptic ulcer disease or malignancy (3). Here, we present a case of gastric tuberculosis that presented with gastric outlet obstruction.

Case History:

A 44-year-old female came to our OPD complaining of distension in her upper abdomen and repeated episodes of vomiting since last 18 months. Distention was limited to upper abdomen and occurred after intake of meals. It was relieved on vomiting. Vomiting occurred approximately 45 minutes to 1 hour after meals and contained food particles. It did not contain bile. Patient had history of weight loss since 6 months. There was no other positive history.

On examination, patient was thin, undernourished with mild pallor present. There was no generalized lymphadenopathy. Visible peristalsis was observed in epigastrium. Succussion splash was positive. No other contributory findings on examination.

Provisional diagnosis of gastric outlet obstruction was kept.

Investigations:

1. Chest X-Ray: Within normal limits (Fig. 1).
2. X-Ray abdomen standing: Double bubble sign seen (Fig. 2).

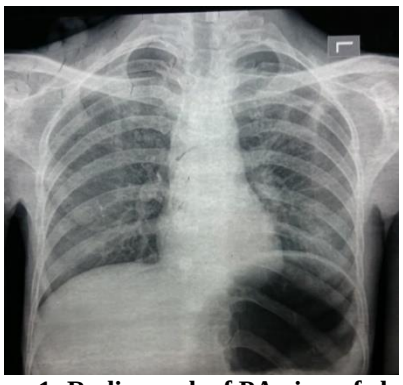

Figure 1: Radiograph of PA view of chest

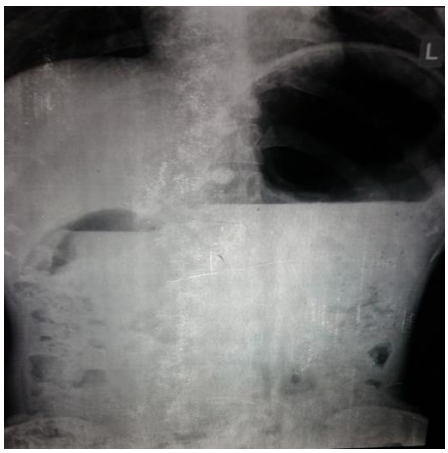

Figure 2: Radiograph of AP view of abdomen

3. USG Abdomen: Findings suggestive of borderline splenomegaly with dilated fluid debris filled and normally peristaltic bowels in right iliac fossa and left iliac fossa.
4. Upper GI endoscopy: Stenosis at pylorus. Scope not negotiable, 5-6 ulcers seen prepyloric region which were thought to be stasis ulcers.

Diagnosis: Pyloric stenosis secondary to peptic ulcer disease.

Operative procedures:

Upper abdominal laparotomy was done. Stenosis was palpated and found to be involving first part of duodenum as well. Rest of the abdomen did not reveal any abnormality. Intraoperative decision was taken for distal partial gastrectomy and Roux-en-Y gastrojejunostomy was performed. Specimen was sent for histopathological examination.

Histopathological examination:
Gross: Partial gastrectomy specimen shows multiple large ulcers on the pyloric end of the stomach with fibrosis on pyloric end (Fig. 3).

Figure 3: Specimen showing mucosal ulcers & pyloric stenosis

Microscopy: Multiple sections from the ulcers are studied. Sections show atrophic mucosa, wall of the stomach shows multiple large granulomas showing large area of caseation with groups of epitheloid cells and Langhan's giant cells.

Opinion: Features are suggestive of Gastric Tuberculosis.

Patient was registered under Category I of Directly Observed Treatment, Short-course (CAT I DOTS).

Discussion:

Commonest site for intra-abdominal tuberculosis is ileocecal region (1). Involvement of stomach is considered to be rare, constituting 0.1-2% of all cases of tuberculosis (2). Usually gastric tuberculosis is secondary to pulmonary tuberculosis (3). Primary and isolated gastric tuberculosis without evidence of lesions elsewhere is uncommon (4). The reason for relative rarity is attributed to bactericidal property of gastric acid, scarcity of lymphoid tissue in gastric wall and intact gastric mucosa of the stomach. The possible routes of infection include direct infection of the mucosa, haematogenous spread or extension from neighbouring tuberculous lesion. Commonly these patients mimic peptic ulcer disease or malignancy but at times clinical presentation may be misleading (4).

The clinical manifestation of this type of infection is non-specific and misleading. There are reports of gastric tuberculosis presenting with fever of unknown origin, gastric carcinoma, gastric outlet obstruction, benign peptic ulcer and stomach perforation (5). Tuberculous lesions of the stomach are usually located on lesser curvature of the antrum and often involve the duodenum but the finding of a tuberculous ulcer at the gastroesophageal junction is uncommon (6). Our case presented as gastric outlet obstruction which is a rare presentation of gastric tuberculosis. Although patient had multiple ulcers found on endoscopy but patient did not gave history relevant for the same. This presentation was highly misleading and suspected diagnosis was of pyloric stenosis.

The diagnosis of tuberculosis requires demonstration of caseating epitheloid granuloma or presence of acid-fast bacilli in tissue, which are frequently not found When granulomas are non-caseating, small and discrete, the differential diagnosis on histology includes Crohn's disease, sarcoidosis, syphilis, mycotic lesions and exposure to beryllium, silicates or reserpine (5, 7). The diagnosis is then by culture and PCR tests. In our case the diagnosis of tuberculosis was reached only after histopathological examination which demonstrated large caseating granulomas with groups of langhan's gaint cells and epitheloid cells.

Lack of accurate clinical diagnosis and no suspicion of tuberculosis, are causes for surgical intervention in most patients, who are operated and the diagnosis is then made after surgery, as in our case.

Conclusion:

Though gastric tuberculosis is rare, patients presenting with gastric outlet obstruction or with endoscopic evidence of diffuse chronic inflammatory activity, the possibility of gastric tuberculosis should be kept in mind especially in areas endemic for tuberculosis.

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