INTRODUCTION
Isolated duodenal tuberculous involvement is uncommon occurring 30 times less frequently than ileocecal tuberculosis. High index of suspicion supported by radiological investigation, explorative laparotomy and histopathological examination of the tissue can lead to a definitive diagnosis of this uncommon condition. The gross pathology is characterized by transverse ulcers, fibrosis, thickening and stricturing of the bowel wall, enlarged and matted mesenteric lymph nodes, omental thickening, and peritoneal tubercles. In areas where tuberculosis is endemic, even in the absence of pulmonary tuberculosis, duodenal tuberculosis should be suspected especially in young patients with upper gastrointestinal obstruction. Herein we report a case of duodenal tuberculosis presenting as gastric outlet obstruction.

CASE REPORT
A 25 years old married female with no known co-morbidities presented with complaints of epigastric pain and on and off vomiting for the last 6 months. During the episodes pain was constant, mild to moderate in severity and aggravated after taking meals. Vomitus was green in colour and quantity was variable. She had a history of melena 2 years back. She also had 2 operative deliveries earlier.

On examination, she was anaemic. The blood pressure was 130/90 mmHg, pulse rate was 88/minute and respiratory rate (RR) was 19/minute. Her abdomen was tender in the epigastrium and gut sounds were audible. Complete blood picture revealed a Hb of 10.5 gm/dl, total leucocyte count (TLC) of 6,900/uL and platelet count of 214,000/uL. ESR was 55 mm after first hour and rest of the biochemical investigations were within normal limits. Her first upper GI endoscopy showed a polypoid growth at D1 and D2 junction; scope could not pass beyond that and biopsies taken revealed moderate chronic inflammation with villous atrophy.

She was managed conservatively. Her second upper GI endoscopy revealed duodenum showing focal villous atrophy with moderate chronic non-specific inflammation contrary to first histology. Third upper GI endoscopy showed an irregular polypoid duodenal growth and malignancy could not be ruled out. Ultrasound scan of abdomen showed thick walled bowel loop in right upper abdomen with wall thickness measuring 0.8 cm in size. CT scan abdomen showed diffuse mucosal thickening and edema in the duodenum involving first and second part causing narrowing of lumen. No lesion was seen in other abdominal viscera.

She underwent explorative laparotomy with an impression of gastric outlet obstruction secondary to a duodenal growth. The operative findings included multiple adhesions, peritoneal tuberculosis and enlarged lymph nodes in the paraduodenal area and mesentery of the small intestine. There was thickening of the duodenal wall but only partial luminal narrowing that did not necessitate a bypass procedure. Adhesiolysis was done and biopsies were taken from tubercles and mesenteric lymph nodes.

Histology reported lymphoid tissue showing effaced architecture by epitheloid granulomas with multinucleated giant cells and areas of necrosis. No evidence of malignancy was seen. Chronic granulomatous inflammation with necrosis was seen in lymph nodes. Patient was started on anti-tuberculous therapy and she gradually improved over 2 weeks. She was discharged and is on regular follow-up.

ABSTRACT
Duodenal tuberculosis is an uncommon disease. It may be either extrinsic or intrinsic or both. In the extrinsic type there can either be primary duodenal involvement or compression due to enlarged paraduodenal lymph nodes. The clinical presentation can be dyspeptic or obstructive symptoms. The dyspeptic symptoms include epigastric pain, nausea, and occasional vomiting and obstructive symptoms include bilious vomiting frequently after meals, epigastric pain, and generalized abdominal pain. This report describes a young lady presenting with gastric outlet obstruction symptoms due to tuberculous adhesion involving the proximal duodenum.

Key words: Duodenal tuberculosis. Gastric outlet obstruction. Adhesions.

CASE REPORT

Duodenal Tuberculosis
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DISCUSSION

Gastric outlet obstruction most commonly occurs secondary to malignancy or peptic ulcer disease. When malignancy is not present and the conventional therapy for peptic ulcer disease fails then one should suspect other etiologies including tuberculosis.7 In the order of frequency, abdominal tuberculosis manifests as tuberculous lymphadenopathy, peritonitis and hepatosplenic or pancreatic tuberculosis. Duodenal tuberculosis constitutes about 2% of all GI tuberculosis.1,7 The clinical manifestation of duodenal tuberculosis are varied and non-specific. The disease may present at any age but commonly seen in young adults.2 Active pulmonary tuberculosis can be seen in 10-50% of patients. This patient did not have any evidence of pulmonary tuberculosis. Laparotomy with biopsy is often needed as endoscopy does not give conclusive findings to diagnose the disease most of the times, however, sometimes it might show a duodenal stricture secondary to tuberculosis.

Tubercle bacillus reaches the gastrointestinal tract via haematogenous spread, ingestion of infected sputum, or direct spread from infected contiguous lymph nodes. The pathological appearance may either show an acute superficial ulcer with enlarged regional lymph nodes or in chronic infections a dense fibrotic reaction and thickened bowel.3-5 Pathologically, there are two principal types of intestinal tuberculosis, ulcerative and hyperplastic tuberculosis. Ulcerative type is secondary to pulmonary tuberculosis and arises as a result of swallowing tubercle bacilli. There are multiple ulcers in the affected segments lying transversely and the overlying serosa is thickened, reddened and covered in tubercles. Hyperplastic type is caused by the ingestion of Mycobacterium tuberculosis by patients with a high resistance to organism.6 The infection establishes itself in lymphoid follicles and the resulting chronic inflammation causes thickening of the intestinal wall and narrowing of the lumen. There is early involvement of regional lymph nodes which may caseate.6,8 The question still remains whether to start these young patients on anti-tuberculosis therapy empirically without letting them undergo a major surgical intervention or not.

Duodenal tuberculosis should be considered as one of the differential diagnosis in young patients presenting with features of duodenal obstruction or dyspepsia in countries where tuberculosis is endemic.7,9 High index of suspicion supported by radiological investigation, explorative laparotomy and histopathological examination of the tissue can only lead to a definitive diagnosis of this uncommon condition.10 Endoscopy may not be diagnostic as in this case and biopsies obtained show only non-specific inflammatory changes hence explorative laparotomy is required in most of the cases. Once identified, most of the times surgical management includes bypassing the lesion and starting the patient on anti-tuberculosis therapy. However, this patient did not have complete obstruction and therefore, no bypass procedure was done. Patient is doing well on anti-tuberculous therapy.

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