Gastroduodenal Tuberculosis: A Report Of Three Cases And Review Of Literature

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Citation

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Abstract

Gastroduodenal tuberculosis is a rare clinical entity. Lack of specific clinical, radiological and endoscopic features makes diagnosis difficult. We report our experience of three cases of gastroduodenal tuberculosis presenting with proximal intestinal obstruction and review the available literature.

INTRODUCTION

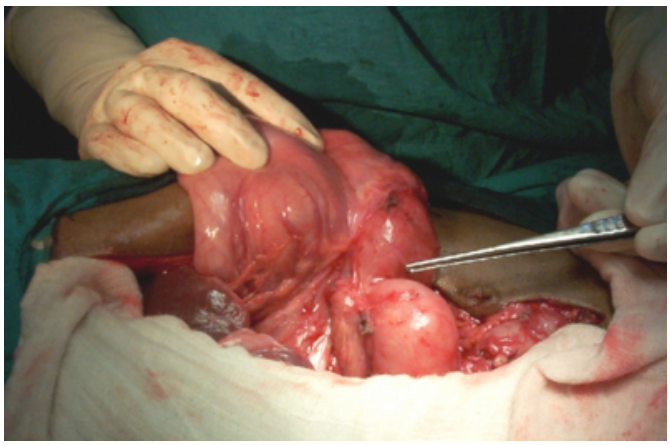
Gastroduodenal tuberculosis is rare[1]. Lack of specific clinical, radiological & endoscopic features makes diagnosis difficult. We report three cases of gastroduodenal tuberculosis in immunocompetent patients without any evidence of pulmonary involvement.

CASE REPORT

CASE 1

A 40 year old male presented with complaints of vomiting for 6 months, epigastric pain for 3 months and with significant weight loss. Clinical examination revealed epigastric fullness with succession splash. No lump was palpable in abdomen. X ray chest, complete hemogram, and renal function tests were within normal limits. Liver function test showed raised total bilirubin of 3 mg/dl and serum alkaline phosphatase of 384 IU/dl. Upper GI endoscopy showed deformed and narrowed antrum, with non passage of scope in duodenum with dilated stomach. Abdominal CT scan revealed upper GI obstruction at level of 2nd part of duodenum. There was IHBRD with dilatation of common bile duct up to distal end with ill defined pancreatic mass. A diagnosis of carcinoma head of pancreas was made. Per operatively, the pancreas was normal with no evidence of any mass lesion. The second part of duodenum was stenosed and indurated. There were pericholedochal lymph nodes causing obstruction and dilatation of common bile duct (fig.1). A diagnosis of duodenal carcinoma was made in view of operative findings. A Roux-en-y choledochojejunostomy with posterior gastrojejunostomy and truncal vagotomy was performed. Lymphnodes were sampled for histopathological examination. Histopathology of the lymphnodes revealed a caseating granuloma. He was put on antitubercular treatment and has now recovered.

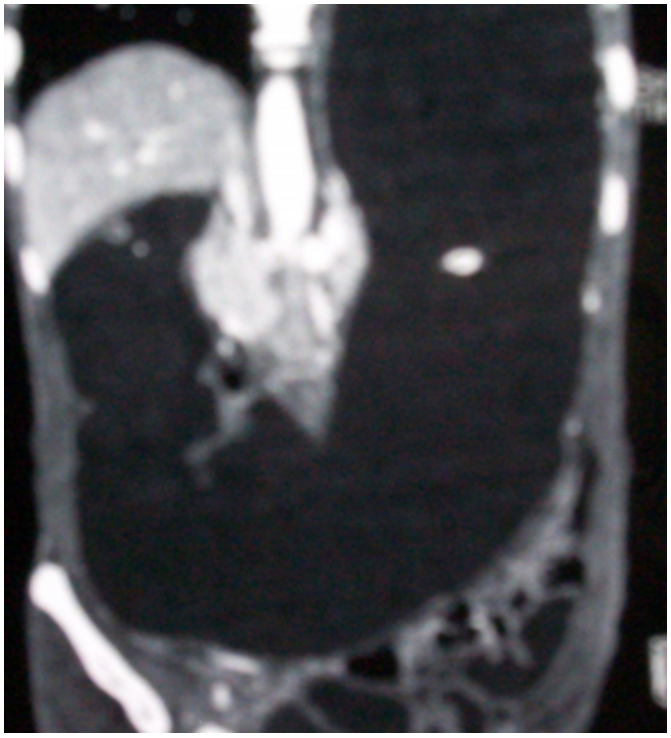
Figure 1



CASE 2

A 20-year-old girl presented with a history suggestive of proximal gastrointestinal tract obstruction of three months duration. Clinical examination showed scaphoid abdomen. Biochemical examinations were within normal limit. Upper GI endoscopy showed dilated stomach and duodenum. CECT showed obstruction at 3rd part of duodenum and a provisional diagnosis of superior mesenteric artery syndrome was made (fig2). Laparotomy showed stricture and tubercles in 3rd part and 4th part of duodenum. Retrocolic posterior gastrojejunostomy was performed. Histopathology showed a caseating granuloma. Postoperatively, the patient was put on antitubercular treatment.

Figure 2



CASE 3

A 22-year-old male presented with pain right upper abdomen with vomiting of undigested food residue for last 2 months. Pain was precipitated by meals. There was no history of hematemesis, melena or any systemic illness. Clinical examination was within normal limits. Upper GI endoscopy showed gastric residue with edematous mucosal folds in duodenum. A bopsy from the duodenal mucosa showed epithelioid cell granuloma. His ESR was 28 mm/ 1st hr. Ultrasound abdomen and chest X-ray were normal. The Mantoux test was negative and gastric aspirate were negative for acid fast bacilli. The Barium Meal test showed a long segment stricture of the first part of duodenum. Tubercular etiology was strongly suspected. A laparotomy showed enlarged, hypertrophied stomach with multiple caseating lymph nodes. Anterior gastrojejunostomy with truncal vagotomy was done and lymph nodes were taken for histopathological examination. Histopathology showed tubercular lymphadenitis. The patient was put on antitubercular therapy.

DISCUSSION

Gastroduodenal tuberculosis is uncommon with a reported incidence of 0.003% to 0.21% of all routine autopsies[1, 2]. In presence of pulmonary tuberculosis incidence increases to 0.3% to 2.3% of autopsies[3]. The reason for its relative rarity is attributed to bactericidal property of gastric acid, scarcity of lymphoid tissue in gastric wall and intact gastric mucosa of the stomach [4]. None of our patients had pulmonary tuberculosis or tuberculosis elsewhere.

The antrum and prepyloric regions are the most common sites of tuberculous lesions in the stomach, and the duodenum is occasionally involved[5, 6]. The possible routes of infection include direct infection of the mucosa, hematogenous spread or extension from neighboring tuberculous lesion. The numerous lymph follicles in the pyloric region, and the superimposition of tuberculosis on a non-specific ulcer, which is common in the region, have been cited as reasons for the higher incidence of tuberculosis in the pyloric region[7, 8]. However, there are few reports about an ulcer or mass being caused by Mycobacterium tuberculosis close to gastroesophageal junction[4, 9]. In our patient's duodenum was involved in two cases and pylorus in one.

The clinical presentation of gastroduodenal tuberculosis is entirely nonspecific with complaints of epigastric pain, vomiting, and weight loss[3, 5] predominating. Hematemesis[3, 6, 9], perforations[7, 8], gastric outlet obstructions[2], surgical obstructive jaundice have all been reported. The cause of obstruction can be either stricture or external compression with reported incidence of 59% and 41% respectively[10]. All of our patients presented with features of upper gastrointestinal tract obstruction and had stricture as the cause of obstruction.

Endoscopic brush cytology and biopsy is only occasionally successful in diagnosis[3]. Submucosal location of the lesion has been cited as a reason for failure of endoscopic biopsies[9, 11]. The success rate of gastric brush cytology in diagnosing Gastroduodenal tuberculosis has been reported in 7 of 120 patients with gastric symptoms[12]. Only one of our patients had diagnosis suggested by endoscopy.

ATT is effective for treating patients diagnosed by endoscopic biopsy or brush cytology, who do not have complications[3, 9, 12]. Due to lack of accurate clinical diagnosis and sensitive laboratory investigations, most patients need surgical intervention for diagnosis. Patients presenting with diagnostic dilemma or with complications such as a pyloric mass, stenosis, bleeding, or perforation require surgery. Perioperative biopsy[2], under running a bleeder in ulcer base[13], truncal vagotomy with gastrojejunostomy[5, 6] and partial or subtotal gastrectomy[5, 11] may be required, depending on the operative findings. A full

course of ATT should always complement any operation for Gastroduodenal tuberculosis.

CONCLUSIONS

In conclusion, gastro-duodenal tuberculosis is seldom diagnosed pre-operatively. High index of suspicion is required in young patients residing in endemic areas, patients with short duration of symptoms, early onset of gastric outlet obstructions and non responders to anti ulcer therapy. Cytological and histopathological evidence of caseating granuloma, epithelioid cells, or acid-fast bacilli or a combination of these three features is the key for determining the diagnosis.

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