

ISOLATED GASTRIC TUBERCULOSIS MASQUERADING AS CHRONIC PEPTIC ULCER: A CASE REPORT

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INTRODUCTION

Extrapulmonary tuberculosis (TB) accounts for 10-15% of all cases of TB and the incidence reaches higher in patients with AIDS.^[1] Gastro-intestinal tract (GIT) is the sixth most frequent extra pulmonary site involved by tuberculosis (TB) and ileo-caecal region is the most common site of involvement in GIT TB.^[2,3] Gastro-duodenal or isolated gastric TB is uncommon even in parts of the world where intestinal TB is endemic including India and stomach and duodenal TB comprises 1% each of abdominal TB.^[4,5] The presenting symptoms of gastric TB are non-specific and misleading and often mimic peptic ulcer disease or malignancy.^[6] Primary isolated gastric TB in absence of pulmonary TB in immune competent host is rare.^[7] This rare occurrence of isolated gastric TB presenting as gastric outlet obstruction in a patient without evidence of pulmonary TB or immunodeficient state is presented.

CASE REPORT

A 32 years old female was referred from a rural hospital for abdominal distension and constipation since five days. She gave history of abdominal pain since one year associated with intermittent episodes of vomiting and low grade fever off and on. Pain was localized to epigastrium and umbilical region and was mild, intermittent in character with no relation to food. The patient was being treated as a case of chronic peptic ulcer without much relief and has noticed significant loss of weight during last six months. There was no history of cough, hematemesis, diarrhea or malena and no past history of

ABSTRACT

Abdominal Tuberculosis (TB) most commonly affects ileo-caecal region. Isolated stomach involvement by TB, without pulmonary infection is rare. Clinical presentation of Stomach TB may be non-specific, radiological findings non-contributory and superficial endoscopic biopsies may not be able to settle the diagnosis. Many cases are diagnosed only after histopathological examination of surgical specimens. High degree of suspicion is needed for early diagnosis of gastric tuberculosis, if unnecessary surgical interventions are to be avoided. A young patient who was being treated as a case of chronic peptic ulcer for one year was referred for treatment of gastric outlet obstruction. Histopathological examination of gastrectomy specimen of the patient showed multiple caseating granulomas characteristic of tuberculosis and presence of acid-fast bacilli on Fite-Faraco staining, with no evidence of tuberculosis at pulmonary or other body sites. This case of isolated gastric TB is reported for its rarity.

any major illness. Her personal and family history was not particular.

On general examination, the patient was a malnourished, pale, afebrile female without any other significant clinical abnormality. Her abdominal examination revealed epigastric fullness with suction splash and no organomegaly. Complete hemogram showed low hemoglobin level, dimorphic anemia and neutrophilic leucocytosis. Her liver and kidney function tests were within normal limits and her +HIV status was non-reactive.

Chest x-ray was normal and abdominal ultrasound showed features suggestive of gastric outlet obstruction. Barium studies revealed a distended stomach (Fig1A).

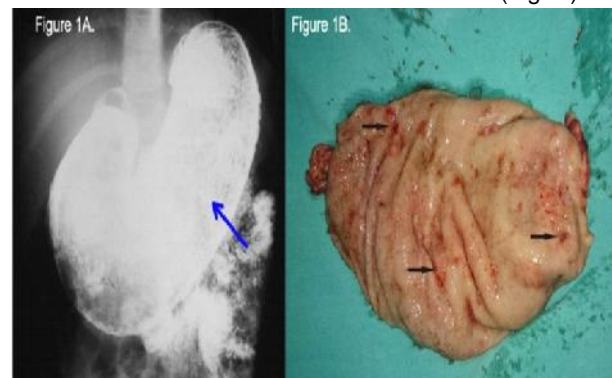


Fig 1(A): Barium study showing distended stomach. 1 (B): Partial Gastrectomy specimen showing multiple ulcers with undermined edges at the pyloric end of the stomach
Upper GI endoscopy revealed multiple pyloric ulcers after sucking out fluid and debris from a grossly

distended stomach with a non-negotiable pyloric stenosis. No mass lesion was identified.

With diagnosis of gastric outlet obstruction secondary to chronic peptic ulcer with pyloric stenosis, the patient underwent exploratory laparotomy. Total truncal vagotomy with distal partial gastrectomy and Billroth II Roux-en-Y gastrojejunostomy with jejunojunctionostomy was undertaken. Rest of the abdomen was normal.

Partial gastrectomy specimen showed multiple ulcers with undermined edges at the pyloric end of the stomach (FIG1B). Necrotic material was expressed from the ulcers. On histopathological examination sections revealed ulcerated atrophic gastric mucosa and presence of multiple granulomas in the wall of the stomach (FIG2a). The granulomas comprised of central area of caseous necrosis surrounded by groups of epithelioid cells, Langhan's giant cells and lymphocytes (FIG 2a- inset).

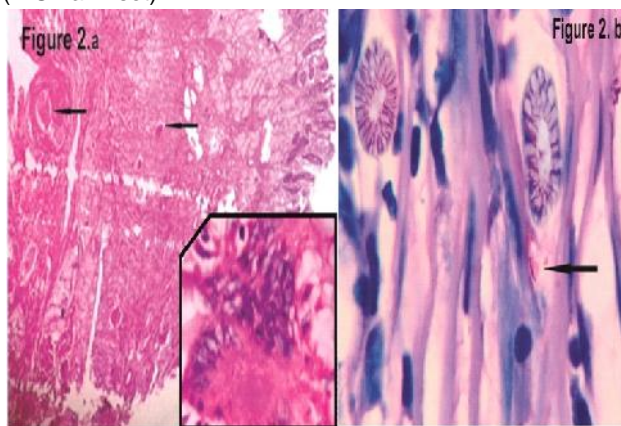


Fig 2(a): Photomicrograph showing ulcerated and atrophic gastric mucosa and presence of multiple caseating granulomas in the wall of stomach (H & E, 400x). Inset: Photomicrograph showing granuloma comprising of epithelioid cells, Langhan's giant cell and lymphocytes (H & E, 1000x). 2(b): Photomicrograph showing acid fast TB bacillus on special stain (Fite-Faraco, 1000x).

Diagnosis of TB was confirmed after visualizing acid-fast Mycobacterium tuberculosis organisms on Fite-Faraco stain (FIG2b). The patient was discharged after an uneventful post-operative period and was enrolled under Category-I of DOTS program. On monthly follow-up visits, she showed remarkable improvement in her general condition.

DISCUSSION

Gastric TB is commonly associated with TB at another site, usually pulmonary or with an immunocompromised state. Primary isolated gastric TB is rare in immune competent host.^[7] First case of stomach TB was reported by Barkhausen in 1824^[8].

The rarity of gastric tuberculosis is due to bactericidal property of gastric acid, continuous motor activity of the stomach and the scarcity of lymphatic follicles in the gastric wall^[9]. The possible routes of infection include direct infection of the mucosa by infected sputum, hematogenous spread or extension from neighbouring

tuberculous lymph nodes and fallopian tubes.^[2] The lesser curvature of antrum and prepyloric regions of stomach are the most common sites involved.

Presenting symptoms of gastric TB are highly nonspecific, vomiting and epigastric pain being the most common and symptoms like weight loss, upper GI bleeding, and fever with variable duration may be present.^[7] Clinical presentation of Gastric TB may simulate gastritis, peptic ulcer or gastric carcinoma.^[10] The patients usually land in surgery wards with complications such as gastric outlet obstruction, hematemesis, perforation or gastro-bronchial fistula.^[9] Case reported here was referred to our centre when the patient developed complication that needed immediate surgical intervention.

There is lack of pathognomonic findings on imaging studies in cases of gastric TB. Barium contrast study in gastric TB, shows narrowing of gastric antrum and filling defects. CT may show gastric wall thickening.

Upper Gastro-intestinal endoscopy in gastric TB reveals single or multiple ulcers or hypertrophic nodular lesions.^[4] In stomach TB a solitary ulcer may be seen in fundus due to TB vasculitis with involvement of regional lymph nodes. Four peculiarities of gastric TB described on gastroscopy are- serpiginous nature of the ulcer with undermined edges, multiple fistulous openings through the mucosa and presence of superficial tubercles near the lesion.^[7] However, Endoscopic biopsies are rarely diagnostic as tubercular granulomas are mostly submucosal, an area not included in endoscopic biopsy^[11]

Granulomatous gastritis is a rare morphological diagnosis and a variety of infectious and non-infectious causes have to be considered in differential diagnosis. Pathologic criteria established by Broders in 1917, for diagnosis of gastric tuberculosis are similar to those accepted today and require demonstration of caseating epithelioid granuloma and presence of acid fast bacilli in tissue. Histopathological examination of either a gastroscopic biopsy or gastrectomy specimen for characteristic morphological features and special stain (Ziehl-Neelson or Fite Faraco) thus becomes most important. But gastro duodenal TB is a pauci-bacillary disease and demonstration of acid fast bacilli may not be possible.^[1] PCR test of the biopsy specimen is essential if culture study is not able to yield acid fast bacilli^[6] and provides a faster alternative for the diagnosis. Anti-tubercular chemotherapy is the main modality for management of gastric tuberculosis when the diagnosis is established before surgery. Surgical intervention becomes necessary when the patient presents with complications such as gastric outlet obstruction, perforation or fistula formation.^[5,11,12]

CONCLUSION

TB can involve any site in GIT and may present with non-characteristic clinico-radiological features and without evidence of pulmonary disease or immunodeficiency. High index of suspicion is needed for diagnosis of gastric TB, especially in patients presenting

with endoscopic evidence of chronic inflammatory activity and associated with non-specific fever.

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Conflict of interest: Nil

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