



Gastric Tuberculosis-The Truth Beneath the Surface!!!!

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Abstract

Tuberculosis is major health concern in India. Pulmonary Tuberculosis is the most common tuberculosis while lymph node tuberculosis is most common extra pulmonary tuberculosis. We encounter one such case of gastric tuberculosis which is very rare.

A 28-year-old female presented with abdominal pain, fever, and loss of weight and loss of appetite since 4 months. The symptoms were not completely relieved after taking symptomatic treatment. On subsequent evaluation patient was found to be anemic and presence of subpyloric lymphadenopathy. The upper gastro-intestinal endoscopy was suggestive of fundal gastric ulcer with circumferential soft lesion and on taking biopsy of it found to be tuberculosis. Subsequently, she was diagnosed with military involvement too.

Introduction

Gastrointestinal tuberculosis is an uncommon entity, in which clinical presentation can be widely variable, from mild and nonspecific symptoms to an acute abdomen and gastrointestinal bleeding. The gastrointestinal tuberculosis is sixth most common cause of extrapulmonary tuberculosis and ileocaecal region is the most common site. Gastrointestinal (GI) tuberculosis (TB) accounts for 1%–3% of all TB cases worldwide, TB of the stomach is extremely rare and accounts for 1%–2% of all GI TB. Little is known about this entity.

Case report

A 28 year old female, non addict, immunocompetent female presented with complaints of abdominal pain, fever along with anorexia and loss of weight since 4 months. For these complaints she received symptomatic treatment which was not associated with any relief. Her past medical and family histories were irrelevant. Patient denied any other clinical symptoms and her physical examination showed palor.

All her routine blood investigations were normal except hemoglobin level of 10 grams per deciliter. Subsequently USG abdomen was done which was suggestive of subpyloric lymphadenopathy and presence of small areas of thickened bowel loop. Patient was posted for upper gastro-intestinal endoscopy for further assessment.

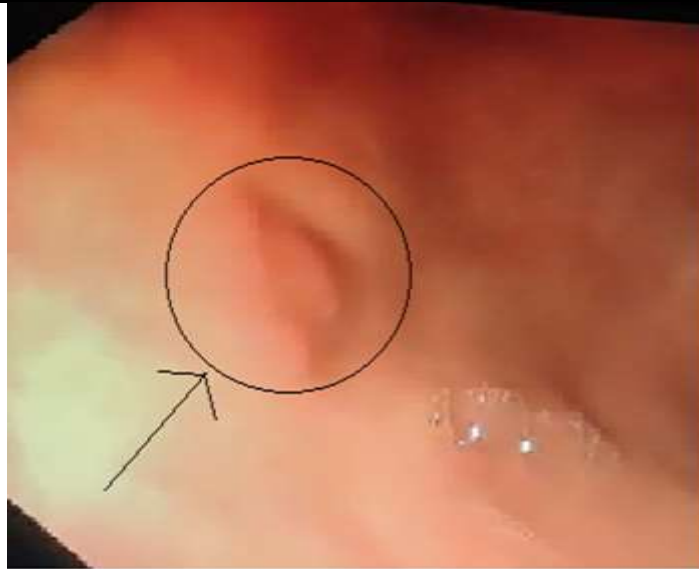


Figure 1-Endoscopic image showing gastric ulcer in fundic region

Figure 2- Chest X-ray & Computed tomography of thorax showing miliary nodules in lungs

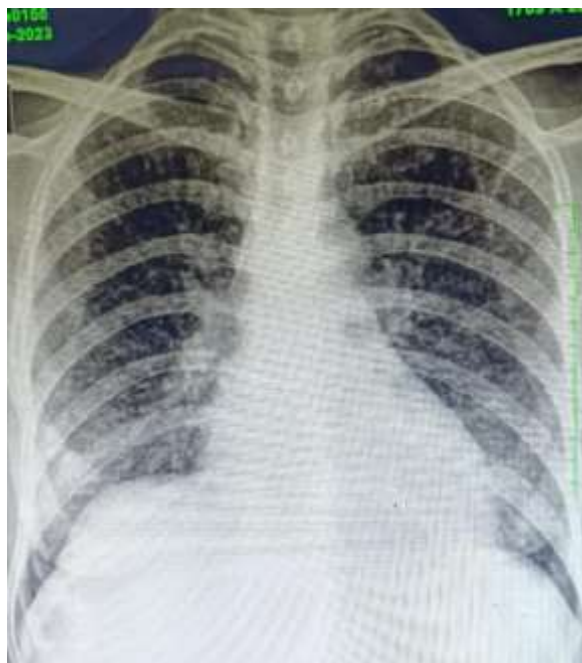


Figure 2 (a)

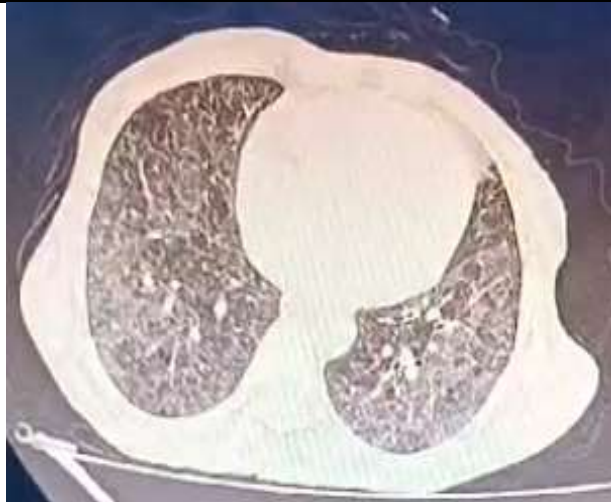


Figure 2 (b)

The endoscopy findings were consistent with presence of ulcer in fundic region (Figure 1) along with presence of well circumscribed circumferential soft, friable and fleshy lesion of approximately 1 cm. The bite on bite biopsies were taken from that area and send for analysis. The biopsy report was consistent with caseating granulomas with numerous acid-fast bacilli detected with Ziehl-Neelsen stain and immunohistochemical analysis for *Helicobacter pylori* was negative. On subsequent evaluation patient was found to have multiple military nodules on chest X-ray (Figure 2a) and which was confirmed with computed tomography of thorax (Figure 2b).

The patient was started on anti-tubercular therapy according to her weight as per National Tuberculosis Elimination Programme with isoniazid, rifampin, pyrazinamide, and ethambutol for 2 months, followed by 4 months of isoniazid, rifampin and ethambutol.

The patient came for follow up after 1 month of therapy which was associated with clinical improvement in the form of weight gain, no abdominal pain and no history of fever along with radiological improvement on her chest X-ray. Endoscopic reassessment after 2 months later was unremarkable.

Discussion

Tuberculosis is endemic in India. Pulmonary tuberculosis accounts for 85% cases and extrapulmonary cases accounts for 15% of cases. Abdominal tuberculosis is the sixth most common site of extrapulmonary tuberculosis. Ileocaecal region is the most common site of gastrointestinal tuberculosis followed by ascending colon, jejunum, appendix, duodenum and stomach.²

Gastric tuberculosis is a rare entity, accounting for 0.5–3% of GI tuberculosis cases³.

Several factors have been described that seem to be responsible for the rare gastric involvement, namely,

- (1) Low pH in the gastric lumen, which has a bactericidal role;
- (2) The absence of lymphatic follicles;
- (3) The local immunity induced by the integrity of gastric mucosa; and
- (4) fast gastric emptying^{4,5}.

Most cases of gastric tuberculosis occur in patients with active pulmonary tuberculosis^{6,7} due to swallowing infected sputum, but it may also be secondary to hematogenous or lymphatic spread and contiguous spread from the adjacent organ.

When no other tuberculosis foci are identified after an extensive workup, it is called primary gastric tuberculosis. The clinical presentation of gastric tuberculosis is entirely non-specific with complaints of epigastric pain, vomiting and weight loss^{8,9}. Our patient presented with complaints of abdominal pain and other constitutional symptoms.

Gastric outlet obstruction is the most common presentation of tuberculosis¹⁰. Other presentations reported in literature are haematemesis¹¹, perforation^{12,13}, non healing ulcer¹⁴, and dysphagia¹⁵. Our patient reported subpyloric small lymphadenopathy on ultrasonography.

The diagnosis of tuberculosis requires demonstration of caseating epithelioid granuloma or presence of acid fast bacilli in tissue¹⁵. For our case it was evident on the upper gastrointestinal endoscopy with presence of acid fast bacilli.

Antitubercular chemotherapy forms the mainstay of treatment when diagnosis of gastric tuberculosis is made. When diagnosis of TB is established, most lesions regress with appropriate antitubercular treatment and do not require excision.¹⁶ Our patient showed marked clinical improvement after initiation of anti-tubercular therapy along with radiological improvement too.

Conclusion

In patients with vague abdominal symptoms and those not responding to symptomatic treatment or antiulcer therapy should always keep differential in mind like gastric tuberculosis. Gastric tuberculosis produces a diagnostic challenge as it can mimic peptic ulcer disease and malignancy.

In conclusion a high level of suspicion is required for the diagnosis of gastric TB, especially in endemic countries such as India. Diagnosis of gastric tuberculosis is of utmost importance and once diagnosed properly, these patients can have good outcome with timely administration of antitubercular therapy and only few require endoscopic or surgical interventions.

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