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Case Report

A rare case of primary gastric tuberculosis presenting as gastric outlet obstruction mimicking malignancy

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ABSTRACT

Gastric tuberculosis (TB), both primary and secondary is a rare condition. It is less common in immunocompetent individuals and in those without any antecedent pulmonary infection. The nonspecific complaints like epigastric pain, vomiting and weight loss may be confounding and lead to difficulty in diagnosis and differential diagnosis may include adenocarcinoma. We present a case of an immunocompetent male who presented with the above mentioned symptoms and on endoscopy showed an ulcerated region in the pyloric antrum with gastric outlet obstruction. A differential diagnosis of adenocarcinoma was suggested by the clinician. The endoscopic biopsy revealed granulomas and giant cells with no evidence of dysplasia. However, Ziehl-Neelson stain for acid fast bacilli was negative. The diagnosis of gastric tuberculosis was confirmed on Polymerase chain reaction (PCR) test for TB. A possibility of gastric tuberculosis should always be kept in mind in an endemic country like India with nonspecific abdominal complaints like epigastric pain, weight loss, vomiting etc. along with other differential diagnosis. A correct clinicopathological diagnosis would help in the appropriate treatment of the patient and would prevent unnecessary surgical excision.

Keywords: Gastric tuberculois, Primary, Mimicker of malignancy

INTRODUCTION

Gastric tuberculosis is a rare condition, both primary and secondary.[1] It is also more common in immunodeficient patients or secondary to pulmonary infection.[2] Primary gastrointestinal tuberculosis is caused by ingestion of food infected with tuberculous bacilli consumed orally.[3] The ileocaecal region is the most common site involved in the gastrointestinal tract, the ileocaecal region being the most common site but stomach and duodenum are rare sites.[5] The lesser curvature of the antrum and the prepyloric region is involved in the stomach, and clinically the symptoms resemble that of a peptic ulcer.[4] Here we report a case of gastric tuberculosis in an immunocompetent male with features of gastric outlet obstruction.

CASE REPORT

A 39 year old male patient presented to the surgical outpatient department with history of projectile vomiting and epigastric pain along with a history of weight loss of 10 kg over a period of 5 months. There was no history of fever, cough or hematemesis. His physical examination revealed no lymphadenopathy and no positive pulmonary findings. Chest X-ray was unremarkable. The hematological parameters were within normal range. The patient was immunocompetent and was negative for HIV, HBV and HCV. Liver function tests and renal function tests were normal.

Upper gastrointestinal endoscopy showed an ulcerated lesion in the pyloric region with narrowing of the lumen

leading to gastric outlet obstruction, suspected to be a malignancy.

The biopsy from the pyloric region showed epithelioid granulomas in the submucosa along with Langhans type of giant cells as seen in Figure 1 and 2. There was mononuclear inflammatory infiltrate in the stroma with mild increase in the eosinophilic infiltrate as well. No evidence of malignancy or dysplasia was seen in the multiple sections of the biopsy examined. However, Ziehl-Nelson stain for acid fast bacilli was negative.

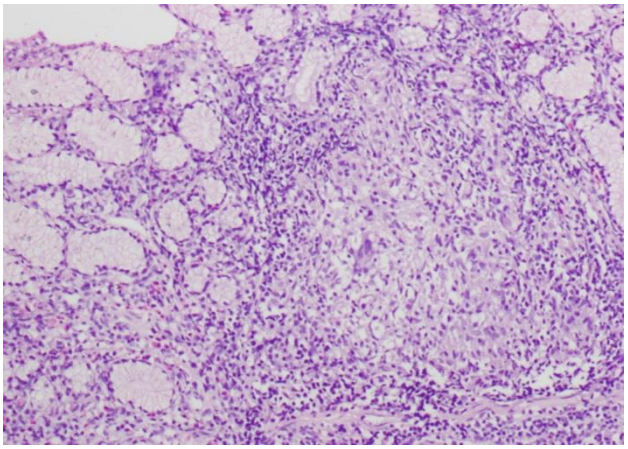

Figure 1: Section showing gastric glands and collection of epithelioid cells forming a granuloma with chronic inflammation consisting of lymphocytes, plasma cells along with eosinophils H&E, 4X.

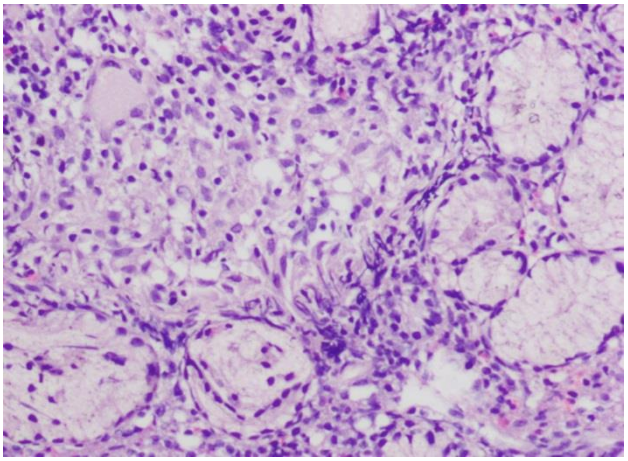

Figure 2: Section showing epithelioid granuloma along with Langhans type of giant cells H&E, 10X.

The polymerase chain reaction (PCR) was done to confirm tuberculosis which was positive. The patient was put on anti-tubercular treatment.

DISCUSSION

The most common site of abdominal tuberculosis is ileo-caecal region. Isolated gastric tuberculosis without pulmonary involvement or infection of any other gastrointestinal site is very rare and are usually located in the antrum or the pre-pyloric region.[2,6] In our case the lesion was located in the pyloric region. The incidence of gastric tuberculosis is reported to be 0.03 to 0.21 percent of all the routine autopsies.[7] The bactericidal action of gastric acid with intact gastric mucosa along with less number of lymphoid tissues in the gastric wall may account for the rare occurrence of gastric tuberculosis.[8]

Isolated gastric tuberculosis may be attributed to ingestion of unpasteurized milk of animals with bovine tuberculosis or in patients with a severely immunocompromised condition.[6] Gastric tuberculosis is more common in endemic countries like India and Africa. The risk of developing tuberculosis increases by 20-30 times in patient coinfected with HIV with an increase in extrapulmonary involvement.[8]

The most common symptoms of gastric tuberculosis includes vomiting and epigastric pain with weight loss, upper gastrointestinal bleed and fever as other symptoms.[8] In this case, the patient had presented with vomiting, epigastric pain and weight loss.

The differential diagnosis includes adenocarcinoma, gastric lymphoma, benign peptic ulcer disease, Crohn's disease, syphilis, and sarcoidosis. Upper gastrointestinal biopsy aids in the diagnosis.[7] In the present case on endoscopy an ulcerated lesion along with gastric outlet obstruction suggested a differential diagnosis of malignancy. The histological examination along with ZN stain and culture may aid in the definitive diagnosis.[8] PCR testing also facilitates the diagnosis.[6] However, stains for acid fast bacilli are usually negative as also seen in our case. Epithelioid granulomas were reported on histopathology but the ZN stain was negative and the diagnosis was confirmed on PCR in the present case.

The lesions usually regress on anti- tubercular treatment and the surgical excision is not required when the diagnosis is established before surgery.[5] In our case the diagnosis of gastric tuberculosis was established on the biopsy and the patient was put on anti-tubercular treatment. On follow-up the patient improved symptomatically and no surgery was required.

CONCLUSION

In endemic countries like India, the patients presenting with non-specific abdominal symptoms with endoscopic findings of gastric outlet obstruction, a possibility of gastric tuberculosis should always be kept in mind. A correct clinicopathological diagnosis of tuberculosis would help in preventing the unnecessary surgical excision and the patient can be treated on anti-tubercular therapy alone.

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