Case Report

Gastroduodenal tuberculosis presenting as gastric outlet obstruction

Bansod Priyanka[1], Kasliwal Neena[2], Pachori Geeta[3]

[1]Senior Resident, [2]Professor, 3Professor and Head, Department of Pathology, J. L. N. Medical College and Hospital, Ajmer (Rajasthan). drpriyankanbansod@rediffmail.com

Abstract:

Gastroduodenal tuberculosis is rare location of abdominal tuberculosis. It usually occurs secondary to pulmonary tuberculosis. In our case, the rare gastroduodenal location of abdominal tuberculosis occurred as primary tuberculosis, in the absence of other identifiable location.

Keywords: Gastroduodenal tuberculosis, Tuberculosis, Gastric outlet obstruction.

Introduction:

Tuberculosis is a major health problem worldwide. Gastrointestinal tuberculosis is an important health problem in developing countries. Ileocaecal and ileal are the usual forms seen in gastrointestinal tuberculosis. Gastroduodenal tuberculosis is a rare location of abdominal tuberculosis. In areas where tuberculosis is endemic, diagnosis of gastrointestinal tuberculosis must be kept in mind, particularly in patients with upper gastrointestinal obstruction and in those with peptic ulcer like symptoms not responding to any kind of medical treatment. Gastroduodenal tuberculosis usually occur secondary to pulmonary tuberculosis. The presentation of duodenal tuberculosis is varied; the commonest being gastric outlet obstruction (1-3). Gastroduodenal tuberculosis is a real diagnostic challenge. Clinical evaluation, radiology and endoscopy (4) are important modalities for diagnosis but they do have limitations. The diagnosis of abdominal tuberculosis is difficult, especially so in health care facilities in developing countries where laparoscopy and colonoscopy are rarely available. Also the difficulty in diagnosing abdominal tuberculosis is due to the lack of efficient and sensitive diagnostic tools as well as its variable anatomical location.

Case History:

We report a case of gastric outlet obstruction due to gastroduodenal tuberculosis. A 20-year-old unmarried male student presented with epigastric pain, frequent vomiting, nausea and low grade fever off and on of eight months. The patient also reported a slight undocumented weight loss. He had no history of tuberculosis and no known exposure to the disease. The patient's family history was also unremarkable. On physical examination, there was pallor and tenderness in epigastric area. On admission, the patient was oriented in time, place and person. Patient was afebrile. His pulse was 88/min, good volume and synchronous with other side. Blood pressure was 130/80 mm of Hg. Respiratory, cardiovascular and central nervous systems were normal. Laboratory analysis revealed white blood cell count of 13,200/mm^3 with polymorphs 70%, lymphocytes 28%, monocytes 1% and eosinophils 1%. Haemoglobin was 12.5gm% and ESR 25 mm/ 1st hour (Westergren). Peripheral blood film examination showed normocytic normochromic picture. Urine examination, blood sugar, blood urea, serum creatinine, sodium, potassium and chlorine, liver function test were normal. Australia antigen test was negative and HIV test was non reactive. Chest x-ray was normal. Ultrasonography abdomen shows grossly dilated gut loops with to and fro movements suggestive of subacute intestinal obstruction. On barium meal, stomach mucosal folds were coarse and thickened. There was area of narrowing in 2nd part of duodenum due to unknown cause. Endoscopy showed duodenal ulcer with deformed first part of duodenum and gastric outlet obstruction. Histopathology of the biopsy shows epithelioid cell granuloma of tuberculosis (Fig. 1-3). The patient was then diagnosed as having duodenal stricture secondary to primary gastroduodenal tuberculosis. The patient was started on anti-tubercular medication and had improved on discharge.

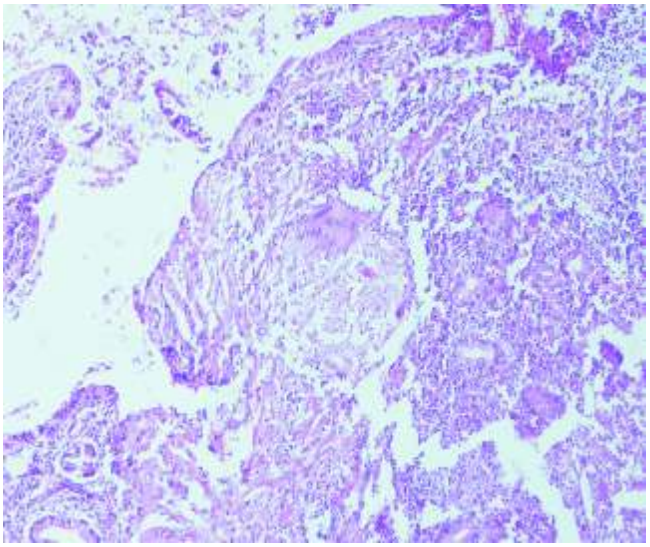

Figure 1: H&E stained section of gastroduodenal junction showing granuloma in 10X view

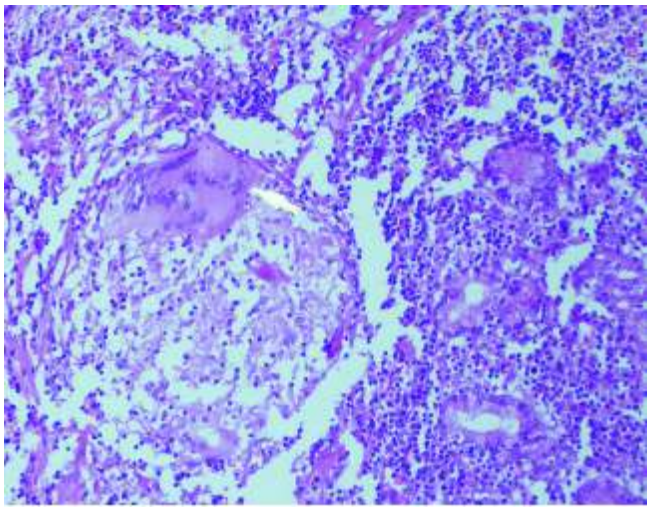

Figure 2: H&E stained section of gastroduodenal junction showing granuloma and giant cell in 20X view

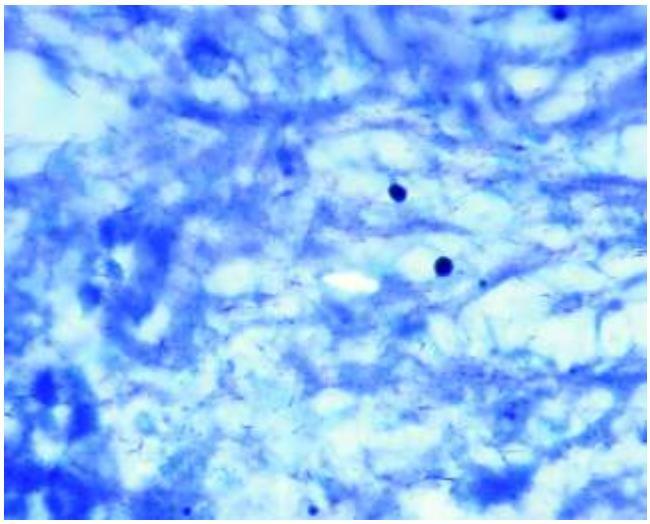

Figure 3: AFB staining of gastroduodenal junction showing acid fast bacilli in 100X view

Discussion:

Gastric outlet obstruction is commonly associated with malignancies and peptic ulcer disease. Proximal duodenal obstruction due to tuberculosis can masquerade as duodenal ulcer. However, when no malignancy is seen and the patient is non-responsive to conventional peptic ulcer treatment, other etiologies need to be explored. The radiological features of gastroduodenal tuberculosis are also non-specific. So the diagnosis of this disease is difficult and is often made post-operatively. In our case, the rare gastroduodenal location of abdominal tuberculosis occurred as primary tuberculosis in the absence of other identifiable locations. The diagnosis of this disease is difficult and is often made post-operatively. Majority of patient with duodenal tuberculosis have signs and symptoms of gastric or duodenal obstruction due to extrinsic compression by matted tuberculous lymph nodes but few patients may have intrinsic strictures. Gastroduodenal tuberculosis can even present with acute perforation of duodenal ulcer. Surgery is the primary line of management of the presenting complication followed by a full course of anti-tubercular therapy. Pyloroplasty with vagotomy was performed in this case.

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