



Duodenal Tuberculosis

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Abstract

Duodenal tuberculosis is uncommon. We present here a case of duodenal tuberculosis who presented with pain abdomen, vomiting and fever. Duodenoscopy revealed deep irregular ulcers in duodenum. Histopathology of duodenum showed features of tuberculosis.

Keywords : Dyspepsia, Bulbar and post-bulbar ulcer, Periduodenal lymphadenopathy, Gastroscopy

Introduction

Though tuberculosis is one of the commonest diseases in India yet it involves the duodenum very rarely and usually secondary to lymphnode involvement (1). Proximal duodenal obstruction due to tuberculosis can masquerade as duodenal ulcer. Although commonest cause of duodenal obstruction is ulcer, other causes must be considered particularly tuberculosis which is common in tropics (2). Majority of patients with duodenal tuberculosis have signs & symptoms of gastric or duodenal obstruction due to extrinsic compression by matted tuberculous lymphnodes but few patients may have intrinsic strictures. Some patients presenting with dyspepsia have bulbar and post-bulbar ulcers accompanied by more widespread mucosal changes, induration and periduodenal lymphadenopathy (3-5). The polymorphous clinical presentation of tuberculosis located in the duodenum may mislead diagnosis (6). Duodenoscopy may be helpful in detection of tubercular stricture as well as follow up (7). Endoscopic biopsy usually shows nonspecific changes necessitating laparotomy for confirmation of diagnosis and relief of obstruction. The abdominal tuberculosis represents a severe disease requiring a differential diagnostic

distinction from other abdominal diseases such as ileitis terminalis, Crohn's disease, neoplasia especially gastrointestinal lymphomas, giardiasis, amoebiasis and yersinia enterocolitis. The disease has a special importance among migrant population (8). Even ulcerated duodenal stricture may be accompanied with pancreatico-duodenal mass and extensive retroperitoneal lymphadenopathy (tubercular) suggestive of metastatic ovarian carcinoma. Tuberculosis can be diagnosed only at laparotomy (9). Duodenal tuberculous ulcer can even present with acute perforation of duodenal ulcer (10). Although unequivocal diagnosis of abdominal tuberculosis can only be made by culture and histological findings, combined computed tomography and ultrasound findings are the most important imaging tools in the diagnostic process for abdominal tuberculosis, while contrast studies help to assess the extent of bowel disease (11).

Case Report

S.D, a twenty two years old unmarried female student presented with pain epigastrium, frequent vomiting, nausea, weight loss and low grade fever of 8 months duration. Physical examination revealed pallor, a small

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firm non-tender lymphnode of 0.5 × 0.5 cm size in right supra-clavicular area & tenderness in epigastric area. Temperature was 101°F. Her pulse was 136 per minute, good volume & synchronous with other side. Blood pressure was 110/70 mm Hg. Chest, cardiovascular & central nervous system were normal. Laboratory analysis revealed white blood cell count of 8000/mm³ with polymorph 58% lymphocytes 40% and eosinophils 2%. Haemoglobin was 8.6 gm/dl and ESR 135 mm 1st hour (Wintrobe). Peripheral blood film examination showed microcytic hypochromic anaemia. Urine examination, liver function tests, blood sugar, blood urea nitrogen (BUN), serum creatinine etc. were normal. X-ray chest was normal. Ultrasonography of abdomen revealed lymphnodes in periduodenal area. Tuberculin test was insignificant while ELISA for tuberculosis was also negative. Duodenoscopy showed deep irregular ulcerations with marked enlarged and erythematous surrounding folds in duodenal 1st and 2nd part. Histopathology of the biopsy from enlarged folds showed tubercular granulomas. Barium studies showed oedematous coarsening of mucosal folds, a spiculated outline of duodenal wall (Fig. 1). Fine needle aspiration cytology (FNAC) from the supra-clavicular lymphnode showed classical features of tuberculosis (Fig. 2,3). Subsequent biopsy of the same node was consistent with diagnosis of tuberculosis.

She was treated with four drugs Rifampicin, INH, Pyrazinamide and Ethambutol for first two months and then three drugs Rifampicin, INH and Ethambutol for four months alongwith pyridoxine and iron capsules.

After six months, she recovered. On physical examination, she was not pale, no abnormal findings detected. She regained 10 kg weight (from 35 kg to 45 kg). Temperature was 98°F, ESR was 15 mm 1st hour (Wintrobe). X-ray chest was normal. Ultrasonography did not reveal any lymphnode in periduodenal or para-aortic area. Duodenoscopy as well as barium studies did not reveal any abnormality.



Fig 1. There was oedematous coarsening of duodenal mucosa with narrowing of lumen of affected portion of duodenum on barium meal examination of stomach and duodenum.



Fig 2. Lymphnode aspirate showing an epitheloid cell granuloma in a reactive lymphoid background MGG stain (10× 40 X).



Fig 3. Papanicolou stained smear from lymph node aspirate shows an epitheloid cell granuloma. background contains reactive lymphoid tissue. PAP stain (10 × 4X).



Discussion

Tuberculosis has variable and rare presentations in whole of the human body. Gastrointestinal tuberculosis is not rare as used to be thought of. Though ileocaecal area and jejunum are the commonly involved organs yet oesophagus, stomach, duodenum and colon are rarely affected. In developing countries the incidence of tuberculosis is on the increase and drug resistance to commonly used drugs has increased tremendously.

The patients with duodenal tuberculosis usually have granulomatous mucosal pseudopolyps with or without ulcers. The disease may progress or heal with resulting fibrosis and subsequent stricturing of the second portion of duodenum. Caseation with abscess formation may occur. Submucosal and extrinsic masses (enlarged TB lymphnodes indenting the duodenal wall) may cause obstruction and simulate malignancy of the duodenum. Radiologic signs are oedematous coarsening of mucosal folds and small superficial ulcerations giving a spiculated outline of duodenal wall mimicking Crohn's disease (12,13). Duodenoscopy shows deep irregular ulceration with marked enlarged and erythematous surrounding folds. Mass like deformities are common. Even duodenal stricture can be found out.

High index of suspicion for tuberculosis in duodenal strictures or ulcers is required for the proper investigations & diagnosis. Tuberculin test and ELISA may not be helpful. Histopathological diagnosis from biopsy of duodenum by duodenoscopy or on laparotomy is the hall mark of the disease.

In conclusion, in patients with stenosing process of the duodenum, tuberculosis should also be taken into account as a rare cause.

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