

## CASE REPORT

### GASTRIC OUTLET OBSTRUCTION: A RARE PRESENTATION OF ABDOMINAL TUBERCULOSIS

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**ABSTRACT:** Gastric outlet obstruction due to tuberculosis causing persistent vomiting is rare in occurrence. Abdominal tuberculosis is most common at ileocecal junction. This case presents with gastric outlet obstruction due to extra luminal compression by an enlarged lymph node around first part of duodenum with duodenal involvement. As the organism is acid fast and number of lymph node in this area is scanty, occurrence of tuberculosis in this region is very uncommon. As per literature, data related to such type of presentation of abdominal tuberculosis is very rare.

**KEYWORDS:** Gastric outlet obstruction, abdominal lump, abdominal tuberculosis.

**INTRODUCTION:** Tuberculosis is a major health problem worldwide, fairly common in most developing countries. Gastro intestinal tract is the sixth most frequent site of extra pulmonary tuberculosis<sup>1</sup>. It can involve any part of gastrointestinal tract (Mouth to anus), peritoneum, omentum, and mesenteric lymph nodes. There are very few literatures regarding gastrointestinal tuberculosis in paediatric age group from medical centers and it is mostly reported from surgical centres.<sup>2</sup> The stomach as well as the duodenum are rare sites for tuberculosis and are usually a result of secondary spread from a primary pulmonary disease. Gastro-duodenal involvement is even rarer disease (1%) in abdominal TB.<sup>3</sup> Here we report a case of abdominal tuberculosis presented as gastric outlet obstruction caused by enlarged lymph node around 1<sup>st</sup> part of duodenum.

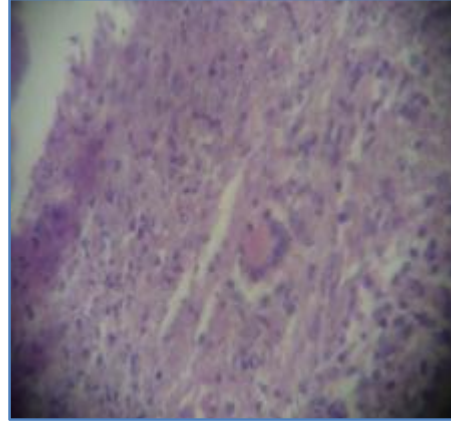
**CASE REPORT:** A 9 year old female child was admitted in our hospital with history of recurrent vomiting for 3-4 months with a visible upper abdominal mass specially appearing after feeds for 10 days before admission. Past history was insignificant, and contact history of tuberculosis was absent. Physical examination on the day of admission revealed-moderate dehydration, mild pallor with grade 2 malnutrition. On GI system examination, there was epigastric fullness with visible peristalsis from left to right, but no hepato-splenomegaly. Primary investigations revealed mild anemia with increased ESR and normal chest X-ray. On day three of admission, patient had repeated episode of convulsion and serum sodium was 112mmol/L. Convulsion was managed with IV phenytoin and sodium correction done with 3% NaCl. Further relevant investigations- straight X-ray of abdomen, abdominal ultrasonography, upper GI endoscopy, Barium meal follow through revealed gastric distension and a huge lymph node around 1<sup>st</sup> part of duodenum causing gastric outlet obstruction. Subsequently mantoux test was done considering the socio-economic status of the patient and found to be positive (12×14mm). Paediatric surgeon consultation was taken. Exploratory laparotomy with resection of the lymph node and palliative retrocolic Gastro-Jejunostomy was done. Histopathology of the lymph node revealed multiple caseating granuloma with multinucleated giant cells suggestive of

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tubercular lymphadenitis. Cartridge Based Nucleic acid Amplification (CB-NAT) test for mycobacterium tuberculosis from gastric aspirate was negative. The patient was started anti-tubercular drug therapy and improved satisfactorily on discharge. Patient was symptom free on follow up and gained weight subsequently.



Barium meals follow through showing gastric distension with retention of barium



Histopathology of dissected lymph node showing caseation necrosis and multinucleated Langhans giant cell

**DISCUSSION:** Because of wide spectrum of clinical presentations abdominal tuberculosis can mimic large number of medical and surgical conditions. Gastroduodenal tuberculosis is a diagnostic challenge and high index of suspicion needed for diagnosis and timely management. Possible route of infection in etiopathogenesis are-hematogenous spread, lymphatic spread or spread from serosa by continuity from adjacent structures, Spread directly through mucosa mainly by ingested bacilli. The clinical presentation of abdominal tuberculosis can be acute, chronic or acute on chronic. Most patients have constitutional symptoms of fever (40-70%), pain abdomen (80-95%), diarrhoea (11-20%), constipation, alternating constipation and diarrhoea, weight loss (40-90%), anorexia and malaise. The most common site of involvement is the ileocaecal region. Stomach and duodenal tuberculosis each constitute around 1 per cent of cases of abdominal tuberculosis.<sup>4</sup>

Involvement of pyloroduodenal canal presents with features of obstruction. The obstruction was caused by fibrotic stricture formation in 59% of patients and extrinsic compression by a lymph nodal mass in 41%.<sup>5,6</sup>

The criteria for diagnosing abdominal tuberculosis are histological evidence of caseating granuloma with acid-fast bacilli stained by Ziehl-Neelsen and culture/PCR positivity. The main diagnostic utilities are imaging (Ultrasonography, Barium study), biopsy for histology and culture. There are no standard guidelines for sonography diagnosis of abdominal tuberculosis. However, corroborative evidence includes: echogenic thickened mesentery with lymph nodes >15mm in size; dilated and matted bowel loops; thickened omentum, and ascites.<sup>7</sup> On barium study there may be mucosal ulcerations, luminal narrowing, extrinsic compression.<sup>8</sup>

Management of gastro duodenal Tuberculosis presenting with features of obstruction includes surgical intervention along with standard 4(four) anti-tubercular drug therapy. Gastrojejunostomy is preferred over pyloroplasty, as intense fibrosis around the pyloroduodenal junction precludes safe pyloroplasty.<sup>9</sup>

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As in our case due to nonspecific clinical and radiological features only a tentative diagnosis was done preoperatively. Exploratory laparotomy and Gastrojejunostomy was done to relieve the obstruction and confirmatory diagnosis was done by post-surgical histopathological examination of the tissue specimen. Confirmation of diagnosis of tuberculosis is ideally done by demonstrating AFB on smear or mycobacterial culture from tissue or by demonstrating caseating granuloma on histopathology. As abdominal tuberculosis is paucibacillary, the yield of organism is low and characteristic histological features are taken as diagnostic.

If diagnosis is made before surgery, most lesions improve with appropriate medical treatment. Since our patient presented already with gastric outlet obstruction, surgery was necessary for the patient and diagnosis was made postoperatively. The factors like paucity of lymphoid tissue, an intact mucosa, gastric acidity and rapid transit of tubercular bacilli due to gastric peristalsis explain rarity of gastro duodenal involvement even in patient with advanced tuberculosis.

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