

# A Unique Variant of Intestinal Tuberculosis

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## ABSTRACT

Duodenum is a rare site of involvement in intestinal tuberculosis. We report a 19 years old boy who presented with non-bilious vomiting and weight loss. His workup showed stricture in ascending colon, multiple liver abscesses with pneumobilia on CT scan. Upper GI endoscopy revealed stricture in 2<sup>nd</sup> part of duodenum distally. He was operated and duodenojejunostomy with limited right hemicolectomy (for stricture in this part of gut) were done. Biopsy report was suggestive of tuberculosis. Antituberculous treatment was started. He responded well and gained 20 kg weight at 3 months follow-up.

**Key words:** *Intestinal tuberculosis. Duodenal obstruction. Pneumobilia.*

## INTRODUCTION

Tuberculosis (TB) is a worldwide communicable disease, which can involve any organ of the body. In a developing country like Pakistan, tuberculosis contributes a major share in the community disease burden with about more than 210,000 new cases diagnosed each year. However, tuberculous enteritis is a rare sequel, occurring in less than 1% of this population. It can affect any part from mouth to anus but ileocecal area is the most common, accounting for about more than 75% of the cases. Involvement of duodenum in intestinal tuberculosis is very rare, contributing only 2-2.5% of all gastrointestinal tuberculosis. In this report, we are describing an unusual presentation of tuberculosis in this part of intestine.

## CASE REPORT

A 19-year-old boy presented with complaints of vomiting and constipation for 2 months. Laparoscopic cholecystectomy was done 9 months back for symptomatic gallstones. Since then, he lost 7-8 kg weight progressively. For the last 2 months, he was having vomiting usually after meals. It was non-bilious, associated with loss of appetite and lethargy. Also associated was constipation off and on with passage of soft stools after every 2-3 days. There was no history of fever. Work-up at a hospital in his home town revealed irregular stricture in the ascending colon on barium enema with a positive Mountoux test and an ESR of 60 mm. On suspicion of intestinal TB, he was started on anti-tuberculous therapy a month back, which he took only for 2 weeks. His symptoms progressively worsened and discontinued treatment of his own.

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On presentation, he was found to be lean with short stature, chacectic look and mildly dehydrated. His abdomen was scaphoid with a positive succussion splash. Laboratory workup showed a raised ESR, normal liver function tests with low albumin (2.7). Occult blood was present in stool. Colonoscopy showed irregular stricture in the ascending colon. Histopathology of the tissue taken revealed acute and chronic inflammation without any granuloma or malignancy. This was followed by a CT scan, which couldn't reveal a colonic stricture. There were, though, other important findings. CT showed multiple hypodense lesions in the liver with ring enhancement, suggestive of liver abscesses along with pneumobilia. Also, a stricture was noted in the 2<sup>nd</sup> part of duodenum distally with dilatation proximal to it (Figure 1). To evaluate this stricture and exclude a duodenobiliary fistula, upper GI endoscopy was done, which revealed pinhole stricture in the distal 2<sup>nd</sup> part of the duodenum (Figure 2). Through that opening a bull-tip catheter was passed and gastrograffin was injected that showed free flow upto ileum. No duodenobiliary fistula was noted. Bile from CBD sent for

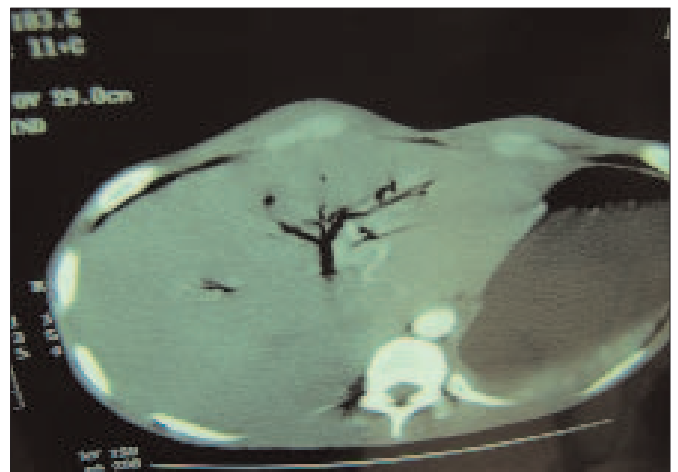
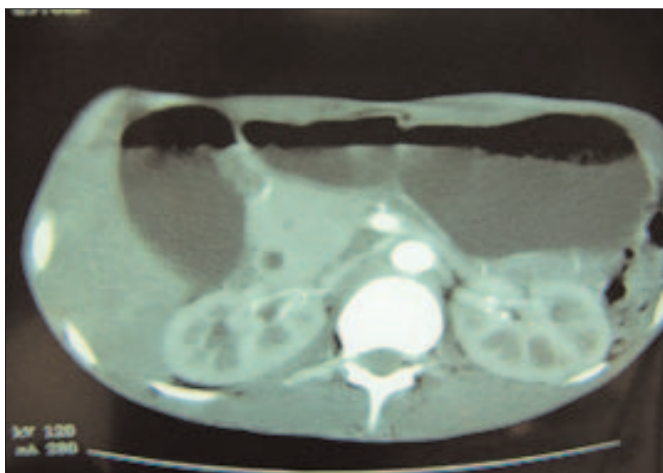
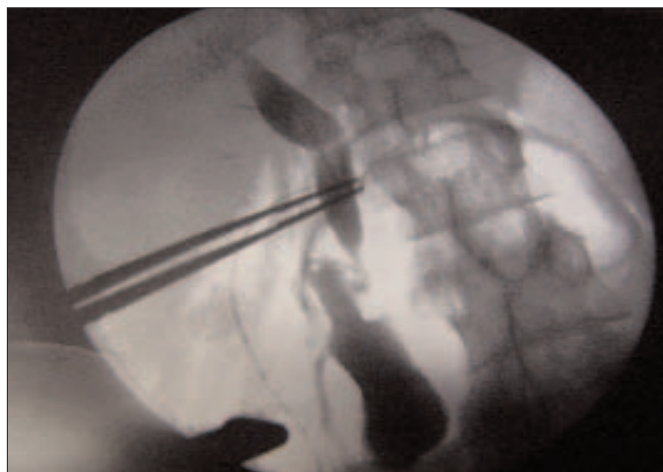


Figure 1: CT scan abdomen showing pneumobilia JPG 1188k.



**Figure 2:** CT scan abdomen showing stricture at the junction of 2nd and 3rd part of duodenum.

culture revealed *E. coli*, *Enterobacter* and *Candida albicans* species, for which he was given antibiotics. A laparotomy was then undertaken. Per-operatively irregular stricture was found at the ileocecal junction extending upto proximal ascending colon with multiple enlarged mesenteric lymph nodes. As expected, a stricture was found in the 2<sup>nd</sup> part of duodenum with enlargement of lymph nodes. A lymph node was sent for frozen section, which was found non-malignant with non-specific inflammation. A limited right hemicolectomy with ileocolic anastomosis and duodenojejunostomy were done. Per-operative cholangiogram revealed normal and patent hepatobiliary tree. Histopathology of the resected bowel revealed acute on chronic inflammation with Langhan's type of giant cells. Resected mesenteric lymph nodes showed chronic granulomatous inflammation and large areas of caseous necrosis. Hence, his final diagnosis was intestinal TB involving distal ileum up to proximal ascending colon as well as duodenum with associated pneumobilia and pyogenic liver abscesses. Postoperative course was un-



**Figure 3:** Per-operative cholangio-gram showing normal flow of dye into duodenum and no evidence of choledocoduodenal fistula JPG 1334 K.

remarkable. Patient was started on oral diet along with oral anti-tuberculous medications from 6th postoperative day and was discharged on the 8th postoperative day. On subsequent 90 days follow-up, patient gained 20 kg weight and is continuing anti-TB medications.

## DISCUSSION

Ileocecal tuberculosis can present with symptoms, like anorexia, weight loss, fever, diarrhea, constipation, bleeding per rectum etc.<sup>1-5</sup> Colonoscopy with biopsy for histopathology and AFB culture is the most useful diagnostic test for ileocecal TB.<sup>5</sup> Barium enema and CT scan can also be helpful. Duodenal tuberculosis lacks specific clinical and radiological features and can present with symptoms of obstruction and upper GI bleeding.<sup>6</sup> Both barium study and CT scan are helpful in localizing the area of narrowing or ulceration. However, even endoscopic biopsy is non-specific for duodenal tuberculosis.

For both ileocecal as well as duodenal tuberculosis, only surgery is indicated for complications, which include bowel perforation, massive bleeding, obstruction not responding to medical management, the latter was the cause in this patient.<sup>6,7</sup> A rare complication of duodenal TB is duodenobiliary fistula, which can cause pneumobilia.<sup>5</sup> However, no case report/series has been found with pneumobilia in duodenal tuberculosis without the presence of any fistula as in this case. One probable reason could be incompetence of sphincter of Oddi, which has been reported to cause pneumobilia in the pediatric age group.<sup>8</sup>

Another entity which could not be found in the extensive literature search was duodenal tuberculosis with pyogenic liver abscesses. Possible source of abscesses here can also be attributed to the incompetence of sphincter of Oddi. Pyogenic liver abscesses are conventionally treated with antibiotics, which we did in this patient and we expected pneumobilia to resolve once the duodenum was decompressed post-by-pass surgery.

The objective of reporting this unique case is to highlight the variability in presentation of intestinal tuberculosis and its associated complications.

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