

# An Unusual Presentation of Crohn's Disease - A Case Report

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**Abstract:** ***Introduction:** In a developing country like India, which is endemic for tuberculosis a patient presenting with features of intestinal obstruction is often misdiagnosed as abdominal tuberculosis and wrongly treated for the same. With the changing epidemiology of Crohn's disease (CD) and intestinal tuberculosis (ITB), we are in an era where difficulty in discriminating between the two diseases has increased, and the morbidity and mortality resulting from a delayed diagnosis or misdiagnosis is considerably high. **Observation:** This case report presents a case of subacute intestinal obstruction misdiagnosed as abdominal tuberculosis treated with anti-tubercular therapy for 2 years later on underwent resection and anastomosis for the same and proved to be Crohn's disease by histopathological examination. **Conclusion:** The aim of this report is to highlight and distinguish the two disease to prevent undue intervention and decrease morbidity and mortality caused due to delayed diagnosis or misdiagnosis.*

**Keywords:** Crohn's disease, Tuberculosis, Distinguishing features

## 1. Introduction

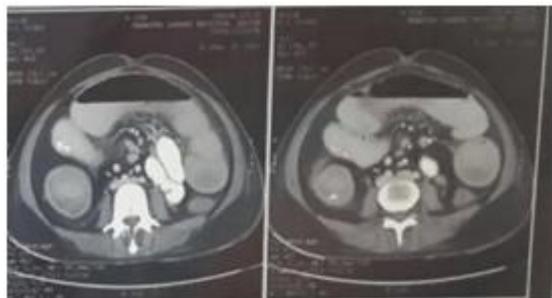
In a tuberculosis endemic country like India, a patient presenting with features of intestinal obstruction is often taken as intestinal tuberculosis and is managed by physicians with anti-tubercular drugs for many months in view of relief of stricture and thereby from obstruction. Such cases are never given a confirmatory tissue diagnosis of tuberculosis or any other inflammatory or malignant condition related to the abdomen before starting the medications. Further such patients develops resistance to the tubercular therapy with no relief of abdominal symptoms and are hence referred to the surgical department for exploration and further management. This case presents a similar scenario of a misdiagnosed case of Crohn's disease. Crohn's Disease Named after Dr. Burrill B. Crohn, first described in 1932 along with colleagues Dr. Leon Ginzburg and Dr. Gordon D. Oppenheimer, belongs to a group of conditions known as Inflammatory Bowel Diseases (IBD). It is a chronic inflammatory condition of the gastrointestinal tract, most commonly affecting the small bowel but can involve the entire GI tract from mouth to anus [1]. Whereas Intestinal Tuberculosis involves the ileocecal region most commonly due to the high concentration of lymphoid aggregates in this area and possibly also due to the prolonged contact between the bacilli and mucosa [2]. With the changing epidemiology of Crohn's disease (CD) and intestinal tuberculosis (ITB), difficulty in discriminating between the two diseases has increased, and thus morbidity and mortality resulting from a delayed diagnosis or misdiagnosis has also increased considerably.

## 2. Case Report

A 24 years old female, with complaints of abdominal pain and distension on and off past 2 years associated with chronic cough, evening rise of temperature and significant weight loss past 1 year. Admitted in our hospital multiple times and treated on lines of Intestinal tuberculosis (DOTS regime CAT-I). Took Antitubercular treatment (ATT) twice past 2 years. Abdominal distension increasing past 6 months causing respiratory distress. Also complaints of passing dark

coloured blood per rectally past 20 days associated with constipation and obstipation. On examination patient was conscious, cooperative, well oriented to time, place and person. On inspection the abdomen was distended, no dilated veins or visible lump, umbilicus central and inverted. On palpation, tenderness was present in all quadrants of abdomen, flanks full, no palpable lump. On percussion, fluid thrill was present. On per rectal examination anal tone was normal. No haemorrhoids or fissure or active bleeding points. Finger was blood tinged (dark coloured blood). Investigation revealed, severe anaemia (Hb 5.4), ESR 49. X-ray chest showed pleural effusion. Pleural fluid negative for AFB, predominantly lymphocytes and cell count 1000/cu.mm. LFT and RFT were normal with Deranged PT/INR. CECT whole Abdomen showed Pulled up caecum with stricture in distal caecum and proximal ascending colon causing severe obstruction and proximal small bowel dilatation with patulous ileocaecal valve, ascites and calcified mesenteric lymphadenopathy? **Tubercular aetiology (Fig 1).** Colonoscopy could not be performed due to bleeding per rectum and suspicion of high risk for perforation of friable bowel. Hence the patient was referred to the surgery department for further management. Decision for exploratory laparotomy was taken up. On exploration caecum was found inflamed, complete luminal obstruction of proximal ascending colon with an ulcerative growth which was bleeding on touch with multiple ulceration in the whole length of large bowel. Decision for right extended hemicolectomy with ileo-transverse anastomosis was taken up. The resected specimen was sent for histopathological examination.

Histopathological Examination report of the resected specimen showed disproportionate inflammation of submucosa in the whole length with infiltration of acute inflammatory cells, areas of haemorrhage along with histiocytic cells, multinucleated giant cells and formation of giant cell granuloma. **NO CASEATING NECROSIS SEEN.** Lymph node showed granulomatous reaction. Features suggestive of **CROHN'S DISEASE.**



**Figure 1:** CECT whole abdomen showing pulled up caecum with stricture in distal caecum and proximal ascending colon

### 3. Discussion

Crohn's disease and intestinal Tuberculosis both being inflammatory conditions are difficult to differentiate. The ultimate course of these two disorders is very different. Along with an increase in the incidence of TB, there has been a proportionate increase in the incidence of intestinal TB [3, 4]. Where TB is an entirely curable disease, CD, is a progressive and relapsing illness. While most CD respond to mesalamine preparations, immunotherapy or steroid treatment, a small proportion even respond to antituberculous therapy (ATT). Steroid therapy on the other hand is beneficial for CD but will exacerbate intestinal TB. In fact, a large number of patients with CD are initially misclassified as having intestinal TB in places where TB is endemic before they are treated for CD after of failure to improve with ATT. There are high rates of misdiagnosis in both conditions. 65% of CD had been misdiagnosed as TB, as reported by Tonghua *et al.* from China [5].

#### Differences between crohn's disease and intestinal tuberculosis

Intestinal Tuberculosis	Crohn's Disease
Any Age Group	Younger
Aphthoid Ulcers absent	Aphthoid Ulcerations present
May or may not be associated with pulmonary tuberculosis symptoms.	May be associated with Perianal disease, enteric fistulae and extraintestinal manifestations, bleeding per rectum, diarrhea and shorter duration of symptoms
On CECT ICJ and adjacent medial wall of the caecum is asymmetrically thickened, showing gross wall thickening, adherent loops, large regional nodes and mesenteric thickening forming a soft tissue mass. Ascites and caseating lymph nodes suggest abdominal TB rather than CD	CECT shows "vascular jejunization of the ileum" or the "comb sign." Abrupt tapering, right angle branching, early, dense venous opacification and increased opacification of the bowel wall

The differentiation between CD and TB requires a close introspection as the inappropriate prescription of ATT is enormously costly, also, irrational use of ATT has been shown to increase the chances of drug resistance among mycobacteria. Also, the use of these drugs causes hepatotoxicity and their safety in CD patients is not known. But, in a country where TB is endemic, the chances of

missing a diagnosis of TB should be balanced against inappropriate use of ATT in patients misclassified as TB instead of CD. There are still a number of unanswered questions as to whether in patients with an uncertain diagnosis, initiating a trial of ATT would be appropriate. A delay in instituting treatment of Crohn's Disease develop strictures requiring repeated surgeries and non-healing fistulas with its potential nutritional consequences.

Researchers from China have highlighted the role of polymerase chain reaction (PCR) in differentiating both these conditions. PCR assay, which indicated that 71.4% of intestinal TB specimens with non-caseating granulomas were positive by PCR, but no CD specimens with non-caseating granulomas amplified *M. tuberculosis* DNA. The study also found that 54.8% of intestinal TB specimens that tested negative for AFB tested positive by PCR assay [6].

The next question is that with speculations that CD is caused by *M. paratuberculosis* [7].

The specificity of PCR is also a debateable question in differentiating the two diseases. The primers used in studies were derived from insertion sequence *IS6110*, which has been demonstrated to be highly specific for *M. tuberculosis*, without interference with DNA elements from other mycobacteria, including *M. paratuberculosis*, and to be repeated in the *M. tuberculosis* chromosome [8].

At present, there are no specific diagnostic tests for CD because the pathogenesis of CD is still unclear. The diagnosis of CD in our patients remains a diagnosis of exclusion, which is only possible after excluding intestinal TB

### 4. Conclusion

To conclude a guideline-based approach to a patient with colitis with regard to both diagnosis and treatment would go a long way in preventing unnecessary inappropriate ATT for patients with CD and appropriate early treatment for a patient with TB. Such cases should be started on treatment only after a tissue diagnosis based on colonoscopy. This topic requires more thorough study and newer more specific and sensitive diagnostic methods for distinguishing TB and CD.

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