

Case report

**The challenge in diagnosing Crohn's disease in TB endemic region
– A case report with review of literature**

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Abstract

The challenge in diagnosing the regional ileitis existed since 1932 when Crohn, Ginzberg and Oppenheimer first reported their case¹. Many Indian researchers accepted that during last decade there was considerable increase in the incidence of Crohn's disease (CD) in India which poses great challenge in diagnosing it, due to high prevalence of tuberculosis². In this perspective we report a case which made a stimulus to review the literature. The purpose of this manuscript is 1. To document the occurrence of an additional case of CD in India, 2. To report that CD can rarely present as post operative enterocutaneous fistula, 3. To discuss the criteria in diagnosing the CD in Tuberculosis (TB) endemic area.

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Case report

Clinical Details: A 35-year-old male presented with complaint of faecopurulent discharge from the right iliac fossa and below the umbilicus. Ten months back, he underwent an emergency laparotomy for acute abdomen at outside hospital, image studies and peroperative findings were not provided. The patient started to have faecopurulent discharge, few weeks of the surgery. Further he revealed that for past 2 years he gets on and off chronic abdominal pain, diarrhoea and vomiting. Fistulography done, confirmed it as enterocutaneous fistula. Patient underwent fistulectomy, ileal resection and end to end anastomosis. **Pathological Investigations:** The resected ileum showed stricture, proximal dilated part and creeping fat (Fig 1). The histograph showed distortion of mucosal architecture along with normal

mucosa, Fissures & ulcers, non caseating granuloma in the submucous & muscularis layer and transmural inflammation (Fig 2). The section stained for acid fast bacilli showed negativity. The rest of the laboratory investigations were unremarkable. **Diagnosis & Management:** With these above findings, we came to the diagnosis of Crohn's Disease. Patient was treated with antibiotics for postoperative stage, prednisone and sulfasalazine (as per the limited resource management guidelines) with every one month follow-up.

Discussion

In India, CD was considered nonexistent until 1986³, even though it's existence was debated over past four decades⁴. Previous studies from India (1976 – 1998) showed CD was rare⁵, but the recent multicentric studies and case reports shows that there is

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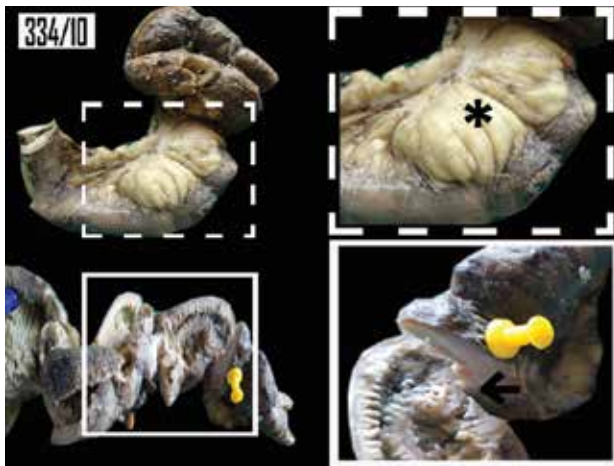


Fig 1 – Resected Ileum - Gross specimen shows the creeping fat (* symbol) and the obstructed part (arrow).

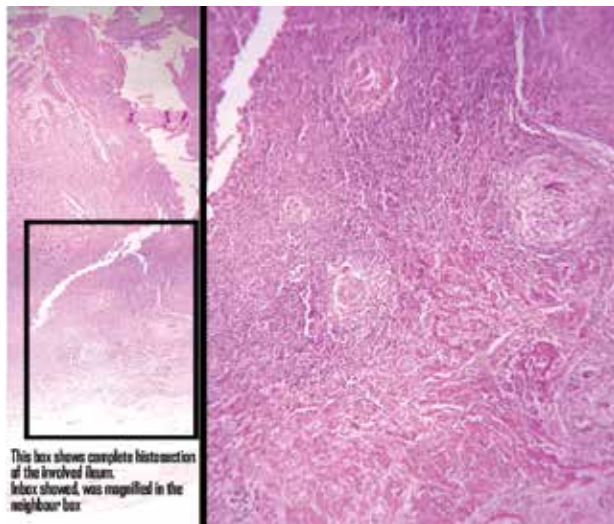


Fig 2 – Histology section shows fissure with ulceration, distortion of the mucosa, non caseation Granulomatous inflammation involving the sub mucosa and muscularis layer.

a progressive increase in the incidence of CD⁶. The reason for increase in the incidence of CD is well correlated with increased industrialization, improved sanitation and hygiene status of the country which favours the 'Hygiene Hypothesis' of CD^{7,8}.

The age incidence of CD in India is less than 40 years with male predominance in contrast to female predominance in the western literature. The common symptoms are diarrhoea, abdominal pain and weight loss for longer duration. Entero cutaneous fistula was uncommon in Indian literature⁶. Patients present with above said complaints, undergoes endoscopic biopsy and have Granulomatous lesion without

caseation necrosis are huge diagnostic challenge for the pathologists, physicians and surgeons because they have to differentiate between gastrointestinal tuberculosis (GITB) and CD (Table 1)^{4,9,10}. It has become important because both have different outcome and treatment. GITB is entirely curable and steroid is not indicated where as CD require long term treatment, follow up and steroid is given⁹.

To overcome this challenge WHO devised the objective diagnostic criteria based on integrated approach to minimise the confusion and misdiagnosis. It consists of 1. Discontinuous or segmental lesions 2. Cobble stoning or longitudinal ulcers 3. Transmural inflammation or strictures 4. Non Caseating granuloma 5. Fissures or Fistula 6. Peri anal disorders. A definite diagnosis was made when either 1+2+3 were present with any of the 4/5/6 or when 4 was present with any 1/2/3⁶.

Management consensus of IBD devised the specific criteria for Asia Pacific region which says 4 - 8 weeks of ATT should be given and response to ATT taken into count. Majority of authors agree as benefit of treatment should be given to the curable condition i.e. tuberculosis^{6,9,11}.

Serological investigations for Anti Saccharomyces cerevisiae Anti body (ASCA) was not useful because it does not differentiate GITB and CD¹². PCR DNA assay for mycobacterium tuberculosis with specific primers showed good sensitivity and specificity¹³.

Das et al specifically says that CD in India is similar to other regions except for delay in diagnosis which leads to further complication⁶. This is due to under diagnosis (assuming CD is rare but the literature evidence showed otherwise) and misdiagnosis (in the favour of tuberculosis).

In conclusion, by integrating the simple clinical parameters such as absence of fever, hematochezia, diarrhoea and longer duration of symptoms with classic radiological, endoscopic and pathological findings will help to arrive at the definite diagnosis of CD^{2,9}. But in case of diagnostic confusion it will be more appropriate to start ATT and analysing the response to the therapy. In future the most promising molecular methodologies may help to avoid unnecessary ATT given to the unfortunate CD patients.

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