

## Case Presentation on Crohn Colitis Mimicking Intestinal Tuberculosis

Dr. Wangol kiyam, Dr. G. Hemalatha, Dr. B. O. Parijatham

Department of Pathology, Sree Balaji Medical College and Hospital, Bharath University, Chennai, Tamil Nadu, India

### \*Corresponding author

Dr. Wangol kiyam

Email: [wangolkiyam54@gmail.com](mailto:wangolkiyam54@gmail.com)

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**Abstract:** Crohn's colitis is a granulomatous form of colitis which often resembles intestinal tuberculosis. With the increasing cases of Crohn's disease and intestinal tuberculosis now we are in a stage where the difficulty facing physicians in discriminating between the two diseases has increased, and the morbidity and mortality resulting from a delayed diagnosis or misdiagnosis is high. Here, we report the case of a 48 year old male patient presented to the casualty with history of abdominal pain & distension since 1 week. On examination there was diffuse tenderness with muscle guarding & absent bowel sounds. X ray erect abdomen showed air under the diaphragm. Patient was taken up for emergency exploratory laparotomy. Intra operative finding was, a caecal perforation & a mass in the colon. Histopathologically the lesion was showing both the features of Crohn's colitis and intestinal tuberculosis. In these reports we will be highlighting some of the points a pathologist must keep in mind while differentiating Crohn's colitis from intestinal tuberculosis.

**Keywords:** Crohn's colitis, intestinal tuberculosis, caecal perforation, laparotomy.

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### INTRODUCTION

Crohn's disease is a heterogeneous entity which sometimes mimics colonic tuberculosis or vice versa. The gross and histological findings of both can be almost similar, putting the surgeons and pathologists in great confusion. In our case the surgeons suspected it as tubercular mass intraoperatively because of its presentation, in histology the type of ulcer, the presence of Langhans' giant cell, epithelioid cells all were in favour of colonic tuberculosis. After series of tests like tuberculin test, stain for acid fast bacilli, PCR etc and comparing and correlating with clinical findings we have reported the case as Crohn colitis. In these articles we will be comparing the findings of these two diseases in order to avoid misdiagnosis.

### CASE REPORT

48 year old male patient presented to the casualty with history of abdominal pain & distension since 1 week. On examination there was diffuse tenderness with guarding & absent bowel sounds. X ray erect abdomen showed air under the diaphragm. Patient taken up for emergency exploratory laparotomy. Findings: A caecal perforation & a mass in the colon. Right Hemicolectomy was done.

### Gross

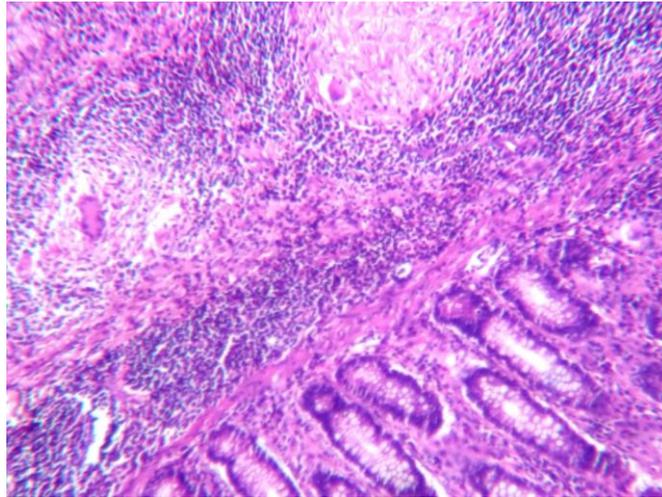
- A partially cut open right hemicolectomy specimen with segment of small intestine measuring 14 cm,

and large intestine measuring 15 cm with omentum adhered, measuring 10 x 6 cm.

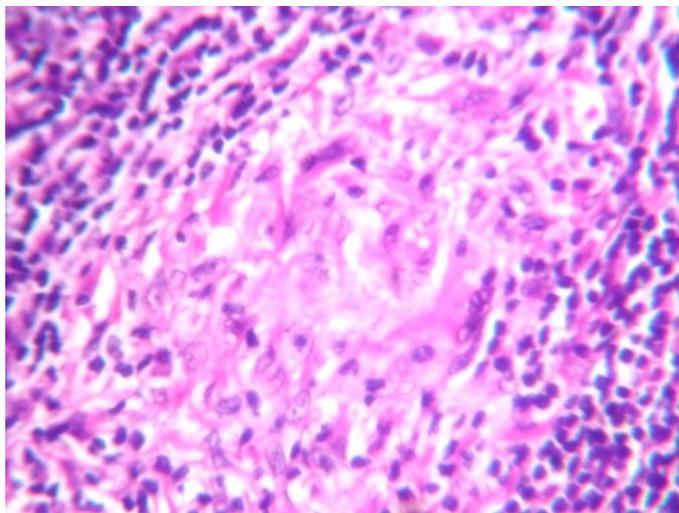
- Caecum perforation present.
- The ascending colon shows 3 shallow ulcers, largest measuring 2.5 x 2 cm, smallest measuring 1 x 0.5 cm.
- The largest ulcer is 19 cm from the proximal resected end and 11 cm from the distal resected end.
- The smallest ulcer is 24 cm from the proximal resected end and 7 cm from distal resected end.
- Rest of the large and small intestine appear oedematous.
- One of the ulcers extended up to circumferential margin.

### Microscopy

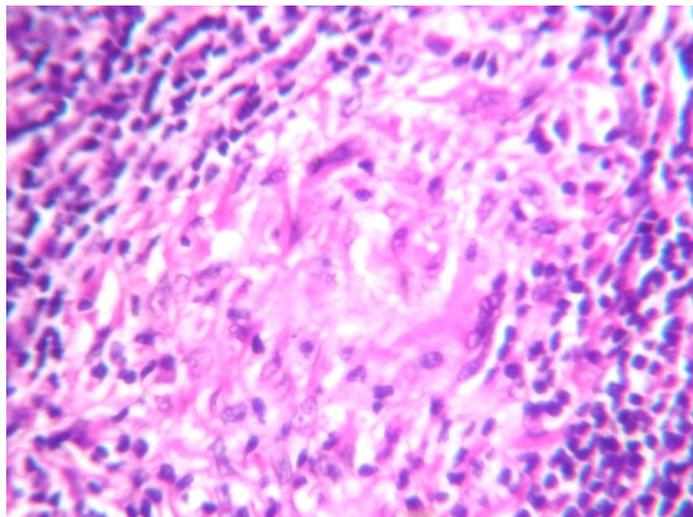
- Sections from the ulcerated region in the colon shows ulceration of mucosa and non caseating granulomatous lesion in the sub mucosa.
- Muscle layer in the serosa are composed of Langhans Giant Cell, multinucleated giant cell, epithelioid cells, lymphocytes and histiocytes.
- Sub mucosa shows oedema.
- Sections from the resected margin show inflammatory cell infiltrates in the lamina propria.
- Sections from the lymph node show multiple non caseating granulomata and area of hyalinization.



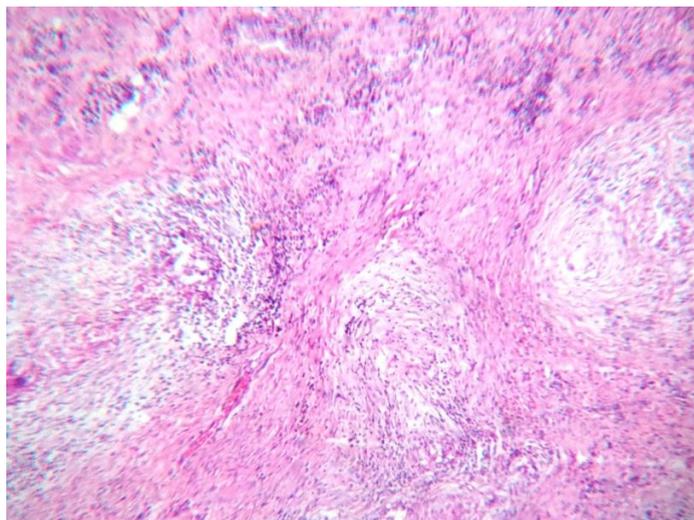
**Fig-1:** Section showing non-caseating granuloma



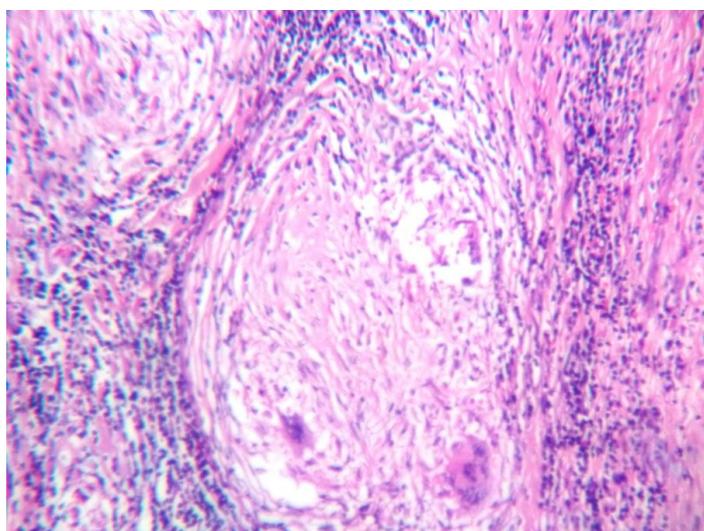
**Fig-2:** Section showing Langhans giant cells



**Fig-3:** Section showing epithelioid cells



**Fig-4: Section showing granulomas extending to muscular layer**



**Fig-5: Section showing granuloma infiltrating the muscular layer. (High Power view)**

## DISCUSSION

Crohn's disease (CD) is an inflammatory bowel disease resulting from inappropriate mucosal immune activation. It is an idiopathic inflammatory disease with a definite genetic background and modified by multiple environmental factors. The incidence of Crohn's disease in TB endemic areas appears to be increasing [1]. Both the disease commonly affect the ileum. Both Intestinal TB and CD are chronic granulomatous disorders with similarities that make the differentiation between these two entities very difficult but at the same time crucial [2]. However, granulomas with or without caseation are usually seen in less than 50% of patients with CD or TB [3]. Granulomas are a feature common to both the diseases. It is not unusual to find them in the mesenteric lymph nodes, while the bowels show none in tuberculosis, whereas in Crohn's disease lymph nodes do not show granulomas [4]. According to Chinese study, up to 65% of CD had been misdiagnosed as intestinal TB [5]. Distinguishing Crohn's disease from intestinal

tuberculosis in endemic areas is challenging as both conditions have overlapping clinical, radio-logical, endoscopic and histological characteristics [6]. The clinical presentation of both TB and CD are similar, except that patients with CD are more likely to be younger [10], present with aphthoid ulcerations, perianal disease, enteric fistulae and extraintestinal manifestations, bleeding per rectum, diarrhea [5]. Most patients have nonspecific ulcers on ileocecal valve and cecum without typical features. TB most commonly presents with transverse or linear ulcers, nodules, a deformed ileocecal valve and caecum, presence of inflammatory polyps, and multiple fibrous bands arranged in a haphazard fashion. CD on the other hand presents with segmental longitudinal ulcers with a cobble stone appearance, stricture, perianal lesion and pseudo polyps [3]. The lesions of CD are more of chronic, and the inflammatory reaction was characteristically transmural. Irregularly disposed cracks and fissures penetrating the wall, many times through the muscularis propria [7]. Studies have shown

that presence of concurrent peritoneal involvement is suggestive of intestinal TB, whereas the presence of perianal involvement is suggestive of CD [6]. The use of polymerase chain reaction (PCR) has been found to have a high accuracy for diagnosing intestinal TB with a specificity of up to 95 % and an accuracy of 82.6 % [9].

## CONCLUSION

Crohn's disease (CD) is an inflammatory bowel disease which has to be differentiated from Intestinal Tuberculosis which shares many common features. Misdiagnosing and treating Intestinal Tuberculosis as Crohn's disease could potentially be harmful, given the immunosuppressive nature of Crohn's disease therapy. This case report stresses many histopathological differentiating points to differentiate the two entities. And lastly pathologist should not be hesitant to do Polymerized chain reaction if they are not convinced which is the gold standard for Tuberculosis.

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