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# Extensive Crohn's Disease with multiple perforations a difficult case to manage

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**Abstract:** Perforation and panparitonitis is a rare presentation of crohn's disease. We are reporting a case of extensive crohn's disease involving rectum to jejunum and presented with skip lesion, multiple perforation and peritonitis. In this case, crohn's disease was diagnosed first time, on the basis of operative findings and confirmed histopathologically. We managed the case by doing exploratory laparotomy, segmental resection of small bowel, double barrel jejunostomy and ileostomy.

**Keywords:** crohn's disease, perforation, laparotomy, ileostomy.

## INTRODUCTION

Crohn's disease is characterized by chronic transmural inflammation of the bowel. It is generally accepted that 1-3% of patients with Crohn's disease will present with a free perforation. Crohn's disease may affect any segment of the digestive tract, more commonly the distal ileum, and colon and perianal region [1].

Incidence of the disease is highest in North America & Northern Europe, and is much less common in Asia. However, due to urbanization & change in dietary habits, the disease is becoming more frequent among Asians including Indians [2]. Free bowel perforation is one of the indications for emergency surgery in Crohn's disease. Massive haemorrhage is rare, abscess formation can be treated non-surgically and is usually not an emergency procedure, bowel obstruction tends to resolve with appropriate medical treatment, and fistula tracts do not require emergency treatment [3].

We are reporting a case of extensive crohn's disease with multiple perforations and generalized peritonitis who required emergency surgical procedure and diagnosis of crohn's disease was made during operation and confirmed postoperatively after histopathology report.

## CASE REPORT

A 40 year male patient referred from primary health centre came to our hospital with the diagnosis of perforation peritonitis. He had complaints of abdominal pain, vomiting and constipation. On examination, patient had tachycardia, hypotension with sign of dehydration like dry lip, dry coated tongue and concentrated urine. His abdomen was tensed and guarding, rigidity were present. Bowel sounds were absent. His blood reports showed Hb-11gm%, TLC-21000 cells/mm$^3$, urea-63mg/dl, creatinine-1.8mg/dl, sodium-138meq/l and potassium- 2.8meq/l**.** His chest X- ray showed free gas under both dome of diaphragm [figure 1]. After resuscitation with intravenous fluids and electrolyte correction was done, he was posted for surgery. Informed written consent was taken. Under general anaesthesia, exploratory laparotomy was done which revealed approximately 2 litres of feculent fluid in the abdominal cavity which was suctioned. Bowel inspected from duodenojejunal junction [DJ] to ileocaecal junction [ICJ]. Approximately 7 feet of bowel seems to be healthy distal to DJ. After that multiple skip lesion with perforation were seen between 7 to 10 feet of segment at interval [figure 2]. Further 5 feet of segment was oedematous and dilated but without any skip lesion or perforation. On further tracing, multiple perforations with skip lesions were seen involving around 3 feet of segment and two feet proximal to ICJ. Skip lesions without perforations were seen on rest of the bowel up to ileocaecal junction. Large bowel was oedematous and inflamed. Proximal perforated segment was resected and both end brought out through abdomen wall as double barrel jejunostomy on left side. Another distal perforated segment proximal to ileocaecal junction was also resected and cut ends

brought out as double barrel mucus fistula on right side of abdominal wall. Bowel loop in between resected segment left inside for future reconstruction. Peritoneal wash given, drain kept inside in pelvis and abdomen closed. Postoperative period was uneventful except mild pus collection at stich line & dehiscence which was managed conservatively. On the 4th post op day CT scan with rectal contrast was done which showed rectum and sigmoid colon mucosa was mildly irregular and thickened with skip ulcer lesions seen along with fibro fatty proliferation of mesentery [figure 3].

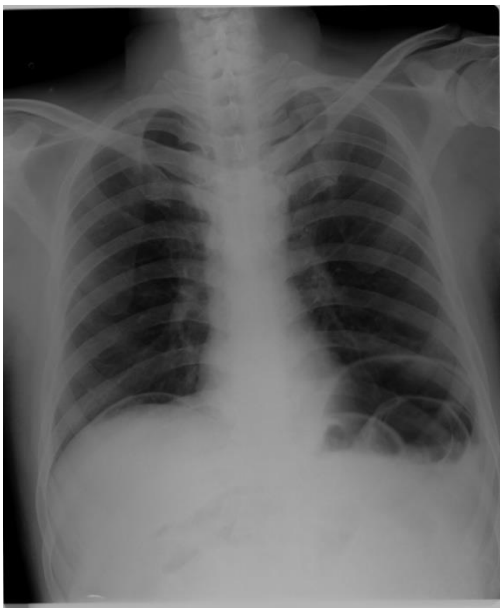

**Fig 1: X ray abdomen (erect) showing free gas under bilateral dome of diaphragm.**

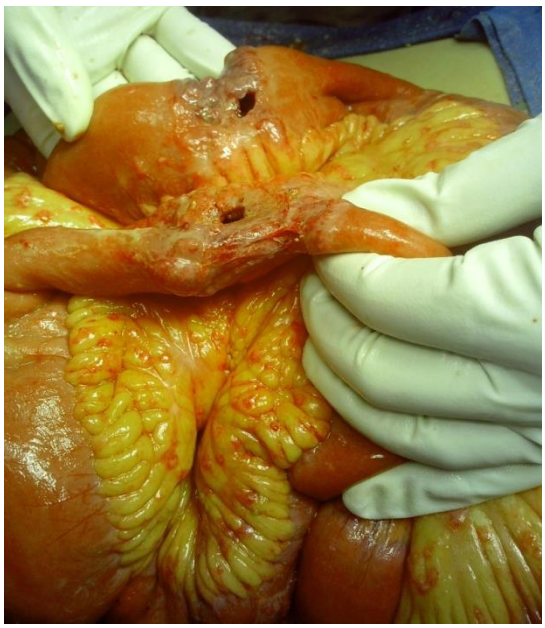

**Fig 2: Intraoperative image showing skip lesions with perforations**

The histopathology report of the specimen showed granulomatous reaction suggestive of crohn's disease. Patient was discharged on 10th post op day under satisfactory condition with advice to attend gastroenterologist outdoor department for further treatment of crohn's disease.

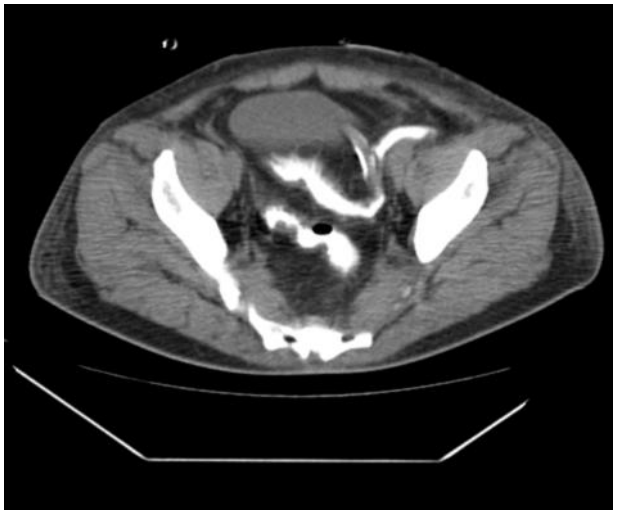

**Fig 3: Post operative computed tomography image with rectal contrast showing skip lesion in rectum.**

## DISCUSSION

Crohn's disease is a chronic condition characterized by an inflammatory process that extends across all tissue layers of the intestine and may appear in any section of the gastrointestinal tract [4]. Free peritoneal perforation in inflammatory bowel diseases is a rare condition with few cases reported in the literature. It occurs in 1–3% of Crohn's disease patients as a first manifestation as our case showed [5].

Free intestinal perforation may occur in crohn's disease at any location in the gastrointestinal tract including ileum, jejunum and gastro duodenal segments. [4] In our case, multiple perforations were seen over jejunum and ileum causing generalized peritonitis. Werbin N *et al.;* in his study showed that out of 160 patients, three patients had free perforation which was the first sign of the disease and the diagnosis of crohn disease was made during operation and confirmed histologically. In our study the patient also presented with generalized peritonitis with features of toxaemia and crohn disease was diagnosed intraoperatively and histopathologically [1]. Crohn disease diagnosis is based on a combination of clinical manifestations and radiological findings and can be confirmed only after histopathology. The disease can sometimes present in a nonspecific manner [6] as our case showed.

Early diagnosis of bowel perforation is important and determines the survival rate. Only 20%

of patients with crohn disease and intestinal perforation have pneumo peritoneum on X-ray of the abdomen and/or on erect chest X-ray. In our case patient had free gas under diaphragm on chest x-ray [7].

Early detection of Crohn's disease may decrease the incidence of acute life-threatening complications provided that appropriate medical treatment is administered and a multidisciplinary approach is offered to these patients [8]. In crohn's disease, the surgical approach depends on the site of perforation and the patient's clinical status [5]. Free intestinal perforation is a relatively rare complication of Crohn's disease [1] and it is an indication of emergency surgery as our case presented with feature of perforation peritonitis and we managed the case by doing emergency surgery.

## CONCLUSION

Crohn's disease can manifest in different ways, free perforation is rare and early detection and surgical intervention in case of perforation is the key to save the life of patient.

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