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Multiple colonic perforations in ulcerative colitis: A Rare case report

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Abstract
Ulcerative colitis, one of the idiopathic inflammatory bowel disease, is a chronic disease that affects the mucosa of rectum and colon. It occurs more commonly in developed countries. The incidence of disease has remained relatively stable during the past 25 years. It commonly affects patients in their youth or early middle age. Dietary and environmental factors play role in etiology. Ulcerative colitis typically presents with periods of remissions and exacerbations characterized by rectal bleeding and diarrhea. The disease can have serious long term local and systemic consequences. Complications include massive bleeding, fulminant colitis with toxic megacolon, intestinal perforation, dysplasia and carcinoma. Risk of colonic perforation with toxic dilatation in patients of ulcerative colitis is 10%. Early surgical intervention is required for reducing mortality.

Keywords: ulcerative colitis, multiple colonic perforations, toxic megacolon, inflammatory bowel disease

Introduction
Perforation of colon is one of the known complications of ulcerative colitis. Perforation of colon in ulcerative colitis is most frequent in acute fulminant type. The risk of perforation during an attack is 4%, the risk may rise to 10% if the attack is severe. It is a surgical emergency and is associated with high mortality and morbidity [1] Primary closure of the perforation is often impossible due to the presence of diseased colon. Controversies existed regarding the appropriate surgical procedure in this scenario with surgeons favouring either diversion ileostomy alone or combined colonic resection with end ileostomy. Serious perioperative condition of the patient precludes total proctocolectomy with ileal pouch anal anastomosis. All recent studies in this scenario point in favour of colonic resection as the more appropriate procedure as it can be performed expediously as compared to total proctocolectomy with ileal pouch anal anastomosis [2, 3]. Here we present a case of ulcerative colitis with multiple colonic perforations treated successfully with colonic resection with end ileostomy.

Case Report
A 70 yr old woman patient, with the history of idiopathic ulcerative pancolitis diagnosed and being treated elsewhere for past 10 years was admitted in our hospital with complaints of pain abdomen, loose stools, high grade fever with chills for 3 days duration and multiple episodes of vomiting. Patient was known hypertensive for which she was on antihypertensive medication and had no previous surgeries. Prior to admission patient was on mesalamine 1.2g tablets taken twice daily. On examination patient had a pulse rate of 110/min, BP 90/60mm Hg, respiratory rate 32/mint, temperature 101 degree Fahrenheit. The patient was ill looking and dehydrated. Abdominal examination revealed generalized tenderness and abdominal distension with guarding and rigidity. Bowel sounds were absent. Laboratory investigations showed Hb (7g/dl), white cell count 15000mc/L, and normal LFTs and RFTs. Patient was Kept nil per oral with Ryles tube insertion. IV fluids and prophylactic antibiotics were given. Blood transfusion was given. X ray abdomen erect view showed air under diaphragm. A provisional diagnosis of hollow viscous perforation was made. Patient was resuscitated and taken for emergency laparotomy. Laparotomy showed perforations in caecum approximately 5 cm, ascending colon approximately 2 cm, transverse colon approximately 4 cm and sigmoid colon about 5 cm. There were pus flakes adherent to perforation sites. [Figure 1]

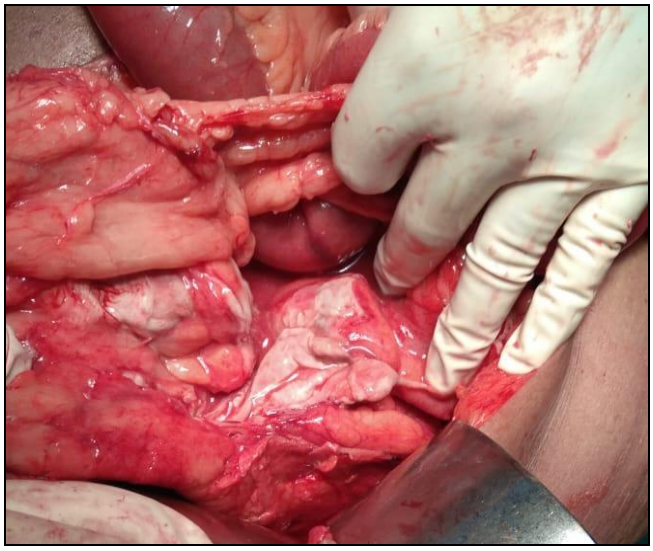

Fig 1: Intraoperative picture showing Caecal perforation.

About 500 ml of faecal staining fluid was suctioned out from peritoneal cavity. Entire colon was erythematous and friable. Subtotal colectomy [Figure 2] with Hartman procedure was done and the terminal ileum was brought out as end ileostomy. Abdominal lavage was done and abdominal drains were inserted. Patient managed in ICU for 5 days and discharged satisfactorily on 12th post-operative day with instructions regarding stoma care and bag change.

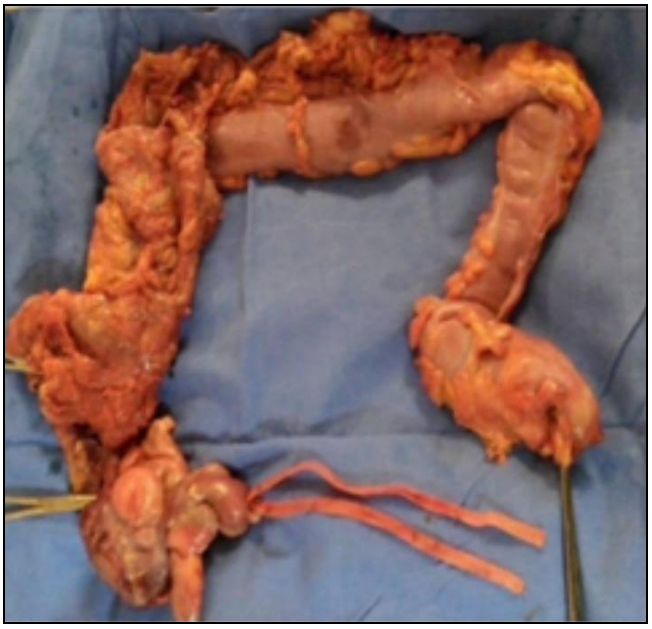

Fig 2: Gross Colectomy Specimen

Discussion

Ulcerative colitis is a chronic inflammatory bowel disease that always involves the rectum, proximal colon to variable extent and rarely small bowel. Disease is common in patients of higher socioeconomic status. Multiple dietary and environmental factors play role in its pathogenesis. The major pathologic process affects the mucosa and submucosa with sparing of the muscularis propria. Pseudopolyps and crypt formation are characteristics. Clinically patients present with diarrhea and passage of mucus. Double contrast barium enema is the primary radiological investigation to arrive at a diagnosis in a case of suspected ulcerative colitis [4]. Contrast CT plays an important role in the evaluation of complications associated with the disease viz. abscess formation and perforation [5]. Colonoscopic examination plays important role in diagnosis. Colonoscopy and barium enema are contraindicated in acute scenarios [6]. The complications can be either local such as abscess formation, perforation, stricture formation, obstruction and fistulisation into nearby structures like bladder, bowel or uterus, or they can be systemic such as erythema nodosum, pyoderma gangrenosum, ankylosing spondylitis and arthritis. Colonic perforation is one of the most dangerous complication as it results in a generalized faecal peritonitis due to absence of adhesions in ulcerative colitis which is extremely dangerous. The association between toxic colitis and perforation occurs in approximately 2% of patients with ulcerative colitis and is associated with considerable mortality rates, which can range from 27% to 57% [7], which increases as the time between perforation and surgical intervention is prolonged [8]. Free colonic perforations without classical signs of a perforation are hard to diagnose, the condition may produce few local signs and the only indication that some disaster has occurred is a marked deterioration in the general condition of the patient. The common sites of perforation are, sigmoid colon, descending colon, caecum and terminal ileum. Rarely the perforations can be multiple [9]. Though surgery in an already ill patient carries much higher morbidity and mortality, it offers the best chance of survival to the patient [10].

Conclusion

Colonic perforation in ulcerative colitis is a surgical emergency with high mortality and morbidity. Rarely colonic perforations can be multiple. Free colonic perforations are difficult to diagnose. Early surgical intervention reduces mortality. The absolute indications for surgery are massive hemorrhage, perforation, suspicion of colon carcinoma and severe colitis with or without toxic megacolon that does not respond to conventional treatment. Total proctocolectomy with end ileostomy, subtotal colectomy with Hartman procedure and end ileostomy are surgical options in such scenario.

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