

Case Report

Surgical management of colonic perforation due to ulcerative colitis: report of a case

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Received: 21 January 2023

Revised: 16 February 2023

Accepted: 17 February 2023

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ABSTRACT

Surgical treatment of ulcerative colitis (UC) is indicated electively in failure of medical therapy and development of malignancy and dysplasia in long standing cases and acutely in fulminant colitis, perforation, bleeding, obstruction or in toxic megacolon. The surgical procedure in the past used to be total proctocolectomy with permanent ileostomy with its attendant psychological, social, physical, and sexual problems. With the advent of ileal pouch-anal anastomosis (IPAA) patients with UC can have a good quality of life without fear of having the permanent ileostomy. The advancement of minimally access surgery has added a new wing to the surgical armamentarium in coping the postoperative recovery, body image, sexual dysfunction etc. Laparoscopic surgery appeals to patients undergoing IPAA because they are generally young and hope to gain the potential benefit of reduced disability, more rapid recovery, and a better body image as a result of more cosmetic incisions. Depending upon the clinical presentation patient may require two or three stage procedure.

Keywords: UC, Toxic megacolon, Ileal poch anal anastomosis, Ileostomy, Total proctocolectomy

INTRODUCTION

Inflammatory bowel disease (IBD) encompasses Crohn's disease (CD) and UC. These autoimmune conditions involve mucosal inflammation of the entire gastrointestinal tract in CD and the colon and rectum in UC. UC is a chronic inflammatory condition of the large intestine that is limited to the mucosal layer of the colon. It almost always involves the rectum, and may extend in a proximal and continuous fashion to involve other portions of the colon. The pattern of disease activity is characterized by periods of active inflammation alternating with periods of remission. While primary management of IBD is medical, surgical indications are generally reserved for toxic colitis, perforation, bleeding, strictures, neoplasms, and failure of medical management.¹ Acute severe UC is a potentially life-threatening condition, and patients are at risk for progressing to bowel perforation or toxic megacolon. In

addition, the short- and long-term risk for colectomy is high.

CASE REPORT

A 32-year gentleman presented to us with history of bloody diarrhea for last 3 years. He was investigated and treated as a case of steroid dependent UC. He presented with severe pain abdomen and diagnosed a case of perforation peritonitis. CECT abdomen and x-ray abdomen diagnose it as a case of colonic perforation. He was operated with subtotal colectomy and proximal end ileostomy and mucous fistula. Following operation, he recovered well. But after one week postoperatively he started bleeding per rectum. Sigmoidoscopy was done which showed grade IV UC with pseudo polyp formation in the residual rectum. He was started on oral Steroids and ASA compounds to which he responded well.

He was planned for second stage surgery resection of residual rectum and ileal J pouch anal anastomosis with diverting loop ileostomy. After about six weeks the final reconstruction of bowel continuity was done. Post operatively the patient is happy without any bleeding per rectum, 5-7 bouts of stool per day and preserved sexual function.

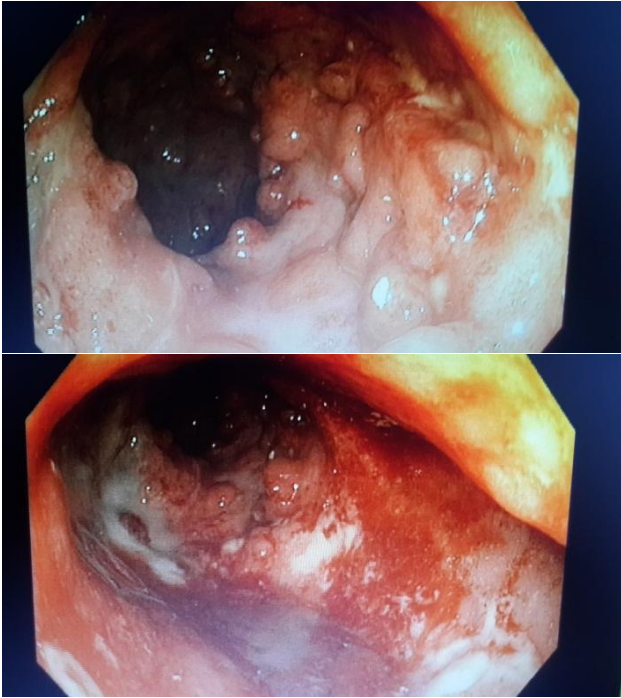


Figure 1: Sigmoidoscopic pictures grade IV colitis after subtotal colectomy with friable mucosa, ulcers, pseudopolyp formation.



Figure 2: Sigmoidoscopy pictures-sigmoidoscopic pictures showed remission of colitis after oral and topical steroid therapy.

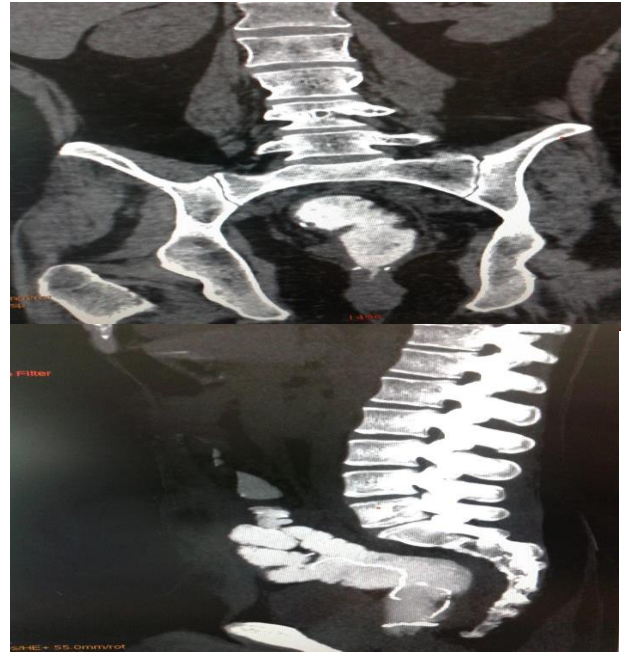


Figure 3: CT Pouchogram showing healthy ileal pouch anal anastomosis before reconstruction of bowel of diverting loop ileostomy.

DISCUSSION

Absolute indications for surgery in UC include uncontrolled haemorrhage, perforation, and colorectal carcinoma or dysplastic lesions not amenable to endoscopic removal.^{1,2} Surgery is also indicated in refractory acute severe UC or medically refractory disease.^{3,4} The most commonly performed surgery for UC is restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA). When surgery is urgent, it is typically done in two or three stages starting with a subtotal colectomy and creation of a temporary ileostomy and mucous fistula (first stage) to decrease the risk of immediate postoperative complications such as anastomotic leak or pelvic sepsis. In the second stage ileal pouch is created and anastomosed to the anal canal with a diverting ileostomy following resection of residual rectum (second stage). The diverting loop ileostomy is eventually taken down to restore intestinal continuity (third stage). Long-standing disease (>8 years), extensive colitis (proximal to the splenic flexure), backwash ileitis, severe inflammation activity, colitis-associated primary sclerosing cholangitis, and family history of CRC seem to increase the risk of IBD-associated malignancy.⁵

With the advent of laparoscopic techniques for colorectal surgery, ileal-pouch anal anastomosis has also been performed laparoscopically. The accumulation of experience and improvement of laparoscopic devices and energy sources have shifted the paradigm towards laparoscopic surgery over the past decade. Although laparoscopic surgery requires a longer operation time, it provides significantly better short and long-term outcomes. The short-term benefits of laparoscopic

surgery over open surgery include shorter hospital stay as well as better cosmesis. The long-term benefits of laparoscopy include better fecundity in young females.

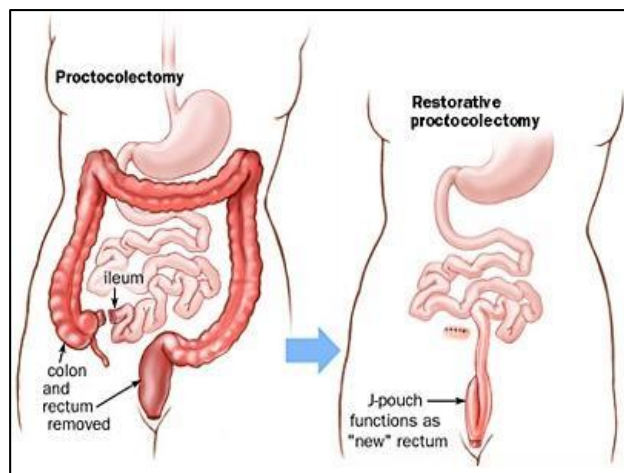


Figure 4: Restorative proctocolectomy with J pouch anal anastomosis.

The meta-analysis studies comparing laparoscopic with open surgery showed that laparoscopic surgery was superior, with lower rates of wound infection and intra-abdominal abscess formation, better bowel function and shorter hospital stays. On top of these advantages, fecundity might be another possible advantage for laparoscopic IPAA. Infertility is one of the problems that develop after IPAA in young females. Several meta-analysis studies showed that the risk of infertility was increased about threefold after open IPAA. Tubal adhesion is postulated as an underlying cause, which could be reduced by performing laparoscopic surgery with small incisions. A cross-sectional study from the Netherlands and Belgium corroborated this idea, and showed that the spontaneous pregnancy rate was significantly higher in the laparoscopy group than in the open surgery group.

IPAA surgery should be done in high-volume referral centres where pouch failure rates are lower. Early postoperative complications following IPAA can occur in up to 33% of patients. Excluding pouchitis, late complications, such as bowel obstructions and strictures, can occur in as many as 30% of patients with pouch failure rates up to 5%.

CONCLUSION

Restorative proctocolectomy with ileal pouch anal anastomosis is the treatment of choice for UC. The vast majority of patients, if carefully selected, can expect a good outcome after IPAA. Two factors are necessary for successful IPAA: a competent anal sphincter capable of providing an adequate high-pressure zone to act as a barrier to pouch contents and construction of a pouch with adequate capacity to act as a reservoir. The hand sewn anastomosis can be replaced by double stapled anastomosis. The J pouch IPAA is the most commonly performed operation. The cause of pouchitis remains a challenge is seen only in 5% of cases. Nevertheless, IPAA is now an established procedure that offers good quality of life.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Mitra DS, Kumar B, Gupta B. Surgical management of colonic perforation due to ulcerative colitis: report of a case. *Int Surg J* 2023;10:521-3.