



Laparoscopic subtotal colectomy with ileorectal anastomosis in complicated Crohn's disease

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Description

In recent years, laparoscopic segmental colectomy for the management of colonic diseases has expanded. Several randomized controlled trials have shown that short-term postoperative outcomes with the laparoscopic approach are better than with open surgery [1, 2]. However, in complicated Crohn's disease and ulcerative colitis requiring subtotal colectomy (STC), surgeons are more conservative in adopting laparoscopic surgery because the patients are often immunosuppressed, weak, or sometimes, hemodynamically unstable. Moreover, tactile sensation is not possible with the laparoscopic approach which is concerning considering tissue friability. Consequently, during patient workup, risks must be carefully weighed against benefits and surgeons' experience to select the most suitable treatment.

In addition to the laparoscopic approach improving cosmesis and body image, which may be more important to younger patients [3, 4], evidence suggests that bowel adhesions may be reduced [5]. However, several studies have shown laparoscopic STCs to take significantly longer to complete than open STCs, which can be dangerous in patients with complicated inflammatory bowel disease [6–8]. We present the case of a 24-year-old with severe complicated Crohn's disease for several years who presented to the clinic with severe recurrent diffuse abdominal pain and

underwent laparoscopic subtotal colectomy with ileorectal anastomosis and diverting loop ileostomy.

The patient had no prior bowel resection and was refractory to medical treatment. Computed tomography (CT) scan revealed strictures in the descending colon, as well as in the terminal ileum and the presence of an entero-colonic fistula. As evident from the CT scans and subsequent intraoperative findings, the colon was found to be extensively diseased, and decision was made to resect the entire colon.

The surgery began with a careful assessment of problems which revealed the strictured segment on the left side. Small jejunal loops, attached to the strictured segment, were sharply taken down and mobilized. The ileocolic pedicle was elevated, dissected and divided. After pedicle division, medial to lateral mobilization of the right colon was performed in a cephalad direction to the transverse colon. The hepatic flexure and terminal ileum were then mobilized. The omentum was dissected off the transverse colon and the middle colic vessels were divided. Subsequently, the left colon and splenic flexure were mobilized down to the rectosigmoid area. In this patient, separation of the retroperitoneum was complicated because of adhesions. The colon was transected just proximal to the rectosigmoid junction about 25 cm from the anal verge. Following this, the entire colon and the terminal ileum were mobilized and freed. The colon was exteriorized from the right lower quadrant incision and the diseased terminal ileum was transected. Perfusion was assessed with PhotoVue. The location of the anastomosis site was verified with sizers that could be stapled and advanced. This area was prepared using a GIA 60 stapler with one fire. Intraoperative flexible sigmoidoscopy was done to assess for anastomotic leak which was negative. Bilateral abdominal nerve tap block was performed and the jejunal area that was taken down from the entero-colonic fistula site was also exteriorized at the extraction site which was repaired with multiple 3-0 Polysorb sutures. This was returned to the abdomen and the segment 25 cm proximal to the ileorectal anastomotic site was brought up to the skin to create a diverting

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ileostomy. The incisions were all closed and the supraumbilical site was closed with a 0-vicryl.

The patient recovered completely from surgery with no immediate or post-procedural complications and was discharged on postoperative day 5. The total case time was 180 min and there was minimal blood loss during surgery.

This case illustrates that laparoscopic surgery is less invasive than open surgery and effective for the management of complicated inflammatory bowel disease. As our video demonstrates, standard laparoscopic techniques can be utilized safely for extensive bowel resection and repair with minimal postoperative scarring, bleeding, and faster recovery.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval All procedures performed in this study were in accordance with the ethical standards of the hospital's institutional review board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent to publication of the video and images in this article was obtained from the concerned patient.

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