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Case report

URGENT LAPAROSCOPIC PERIRECTAL ABSCESS EVACUATION IN A PATIENT WITH CROHN'S DISEASE: A CASE REPORT

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Abstract

Crohn's disease is a chronic inflammatory bowel disease frequently complicated by perianal manifestations[1]. Perirectal abscess formation is a rare but potentially serious complication. We present the case of a young patient with Crohn's disease who presented with anal pain and urinary retention caused by a large perirectal abscess. The diagnosis was established by contrast-enhanced computed tomography. Urgent laparoscopic incision and evacuation of the abscess were performed through the avascular presacral plane. Postoperatively, the patient was treated with targeted double antibiotic therapy and recovered without complications. This case highlights laparoscopic drainage as a safe and effective alternative when percutaneous or transrectal drainage is not feasible on call in the emergency setting.

Keywords: Crohn's disease, laparoscopy, perirectal abscess

Introduction

Crohn's disease (CD) is a chronic inflammatory bowel disease that may affect any segment of the gastrointestinal tract and is frequently complicated by fistulas, strictures, and abscess formation[1]. Medical management includes anti-inflammatory drugs, immunosuppressants, and biologic therapy, with the goal of inducing remission and preventing complications[2].

When complications occur, surgical intervention is often required. Intra-abdominal and pelvic abscesses represent serious complications, occurring in approximately 10–30% of patients during the course of the disease[3]. Smaller collections may respond to antibiotic therapy alone; however, drainage remains the cornerstone of treatment for abscesses larger than 4 cm[4]. The American College of Radiology recommends image-guided percutaneous drainage for Crohn's disease–related abscesses when feasible[4].

If percutaneous, transrectal, or transvaginal drainage is not possible or fails, surgical drainage becomes necessary. Surgical options include open or laparoscopic approaches[5]. Perirectal abscesses in Crohn's disease are rare, and data on optimal management are limited. We present a case of laparoscopic perirectal abscess evacuation using a presacral approach.

Case report

A 17-year-old female presented to the emergency department with severe anal pain and urinary retention that had progressively worsened over two weeks. Symptoms were accompanied by fever. She had been diagnosed with Crohn's disease four years earlier and had received biologic therapy for two years but had discontinued treatment in the previous two years on her own.

Vital signs were stable on admission. Abdominal examination revealed a soft, non-tender abdomen without peritoneal signs. Digital rectal examination could not be performed due to severe pain. Laboratory tests demonstrated leukocytosis (WBC 18.3 × 10^9/L) and elevated C-reactive protein (CRP 175 mg/L).

Abdominal ultrasonography revealed an encapsulated fluid collection suspicious for abscess formation between the rectum and urinary bladder. Emergency contrast-enhanced CT scan confirmed a perirectal abscess measuring 60 × 57 mm located in the lower extraperitoneal third of the rectum, causing compression of adjacent organs and resulting in urinary and fecal retention (Figure 1).

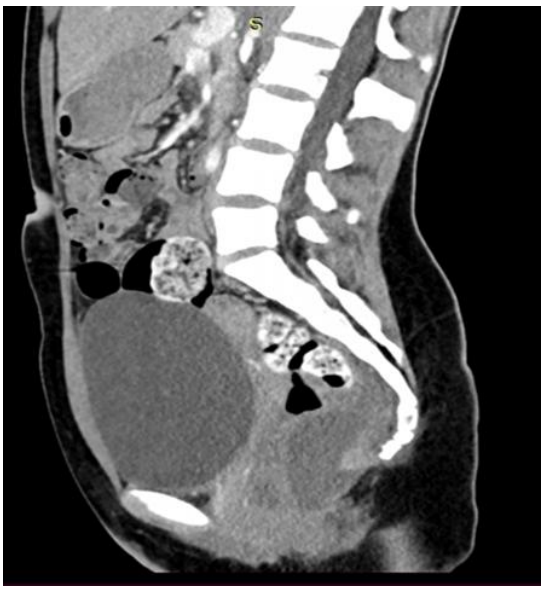
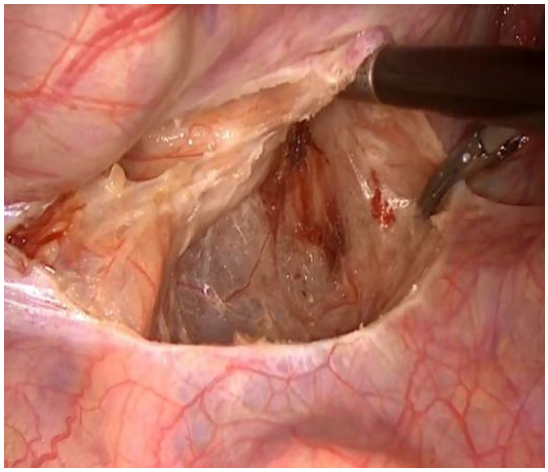


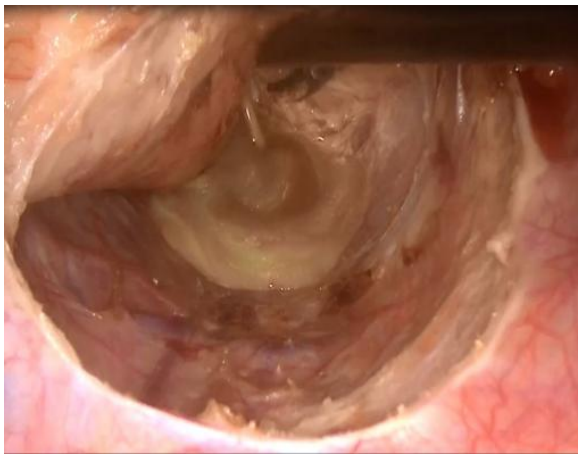
Fig. 1. Contrast-enhanced CT scan demonstrating a perirectal abscesswith compression of surrounding pelvic organs, causing urinary and fecal retention -perirectal abscess

Emergency surgery was performed under general anesthesia with endotracheal intubation. Preoperative intravenous antibiotics (third-generation cephalosporin and metronidazole) and crystalloid resuscitation were administered. Pneumoperitoneum was achieved using the Hasson technique via a supraumbilical incision. Three additional trocars were placed (two in the right hemiabdomen and one in the left).

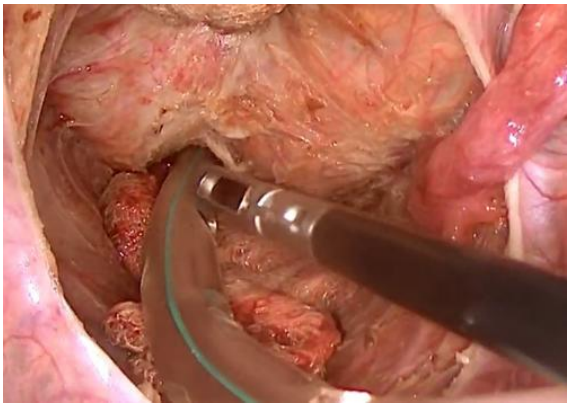
The rectum was mobilized through the avascular presacral plane (holy plane). Upon identification of the abscess, incision and evacuation of purulent material were performed, and samples were sent for microbiological analysis. Thorough lavage with hydrogen peroxide and saline was conducted, and a drain was placed into the residual abscess cavity (Figure 2).
Postoperatively, the patient received targeted double antibiotic therapy based on culture results. The drain was removed on postoperative day 7 after minimal output. The patient was discharged on postoperative day 11 with normalized laboratory values. At one-month follow-up, she was asymptomatic, afebrile, and in good clinical condition.



(a)



(b)



(c)

Fig. 2. Key intraoperative steps: (a) Mobilization of the rectum through the avascular presacral plane; (b) Incision, evacuation and lavage of the abscess; (c) Placement of drainage into the residual abscess cavity

Discussion

The conventional management of Crohn's disease–associated abscesses often involves a two-stage approach: initial drainage followed by definitive surgical resection of diseased bowel when indicated[5]. Percutaneous drainage alone can avoid surgery in approximately 50%

of patients; however, failure may result in urgent surgical intervention, increased morbidity, prolonged hospitalization, and higher rates of stoma creation[6-8].

Pelvic abscesses are preferably drained via transrectal or transvaginal approaches to avoid transabdominal contamination[9]. When these approaches are not feasible or available, surgical drainage is required. Laparoscopic drainage offers several advantages over open surgery, including reduced surgical trauma, improved visualization, and faster recovery[10].

In our case, the presacral (holy plane) approach allowed safe, bloodless access to the abscess while minimizing bacterial dissemination into the peritoneal cavity. This technique is particularly advantageous in well-contained perirectal abscesses walled off by the mesorectum.

Conclusion

Drainage of intra-abdominal or pelvic abscesses in Crohn's disease is often a bridge to definitive surgical treatment. However, in selected patients with mild to moderate disease and localized perirectal abscesses, laparoscopic drainage alone may serve as definitive therapy. The presacral laparoscopic approach represents a safe and effective option when percutaneous or transanal drainage is not feasible.

Conflict of interest statement. None declared.

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