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Case Series

Adverse Outcomes in Elective Hernia Repairs in Crohn's Disease: A Case Series

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Abstract

Background: Approximately 3.1 million Americans are diagnosed with Inflammatory Bowel Disease (IBD). IBD is associated with higher rates of surgical procedures, increased comorbidities, and hospitalizations [1]. While hernia repairs are typically deemed a lower-risk surgery, we advise caution with elective surgical repair in IBD patients.

Methods: This case series describes two patients with relatively quiescent Crohn's disease who underwent elective ventral hernia repair at University Medical Center New Orleans between April 2024 and May 2025. Both patients were identified through review of institutional records.

Results: We present two cases of patients with known Crohn's disease on adalimumab therapy who underwent elective abdominal hernia repair. Both cases were complicated by poor wound healing, intra-abdominal abscess formation, extended courses of antibiotics, prolonged hospitalization, and the need for additional surgeries and procedures, ultimately leading to a more complex disease course.

Conclusion: Given the limited data regarding long-term outcomes following elective surgeries in patients with IBD, this series aims to highlight these risks and encourage clinicians to exercise caution when considering elective procedures for this patient population.

Keywords: Adalimumab; Crohn's Disease; Elective Surgery; Guselkumab; Hernia Repair; Inflammatory Bowel Disease; Post-Operative Complication

Introduction

Abdominal wall hernias are weaknesses in the muscle through which bowel or other tissue can protrude. These are common after intra-abdominal surgeries such as laparotomies, and typically, surgical hernia repair is recommended to prevent further complications. Patients with inflammatory bowel disease (IBD) are at much higher risk than the general population for postoperative complications such as obstruction, ileus, fistulas, and worsening of infective flares [2].

Case Presentation

The first case is a 74-year-old male with ileocolonic Crohn's disease status post ileocecectomy complicated by enterocutaneous fistula requiring multiple exploratory laparotomies in 2015-2017 He was in clinical and endoscopic remission on adalimumab. He was an active tobacco user with 165 pack year history. The patient inquired about elective ventral hernia repair, and despite being advised against it, he underwent a ventral hernia repair with mesh. Two weeks later, he presented to the surgical clinic with purulent drainage and wound dehiscence requiring hospitalization due to a large, complex abdominal wall abscess requiring multiple drains placed by Interventional Radiology (IR). Cultures were positive for enterococcus and MRSA, requiring six weeks of intravenous antibiotics as well as a prolonged course of oral antibiotics. Two months later, the patient was still reporting surgical site soreness, but the surgical site dehiscence had resolved. Our second case is a 38-year-old female with ileal Crohn's disease with stricture and ileosigmoid fistula and abscess status post-ileocecectomy with

fistula takedown complicated by post-operative abscess in 2023, on adalimumab, in clinical and endoscopic remission. She was an active tobacco user with a seven-pack-year history. She underwent elective ventral hernia repair that was complicated by an incisional wound dehiscence requiring multiple hospitalizations with broad-spectrum antibiotics, multiple drains placed by IR, frequent wound debridements, and infected mesh excision for recurrent large abscesses at the surgical site, as well as sinus tract formation. Adalimumab was held during the time of active infection which resulted in antibody formation. She has active inflammation noted on colonoscopy with Rutgeerts i2b disease. Following no further infections from her ventral hernia repair, she was started on guselkumab to treat her ileal Crohn's disease.

Discussion

We present these two complex cases to emphasize the caution clinicians should take in discussing elective hernia repairs with patients with IBD. Both cases were complicated by poor wound healing, intra-abdominal abscess formation, extended courses of antibiotics, prolonged hospitalizations, and the need for additional surgeries and procedures, which ultimately led to a more complex disease course and healthcare cost burden. Both patients were on adalimumab, which, in a large, multicenter study, has shown to have no additional risk of postoperative infections than those not on anti-TNF agents [3,4]. Notably, both of our patients were daily tobacco users, which does increase the risk of postoperative complications [5]. While smoking increased their risk for infection, that alone does not account for the severity of post-operative complications they experienced. Some smaller studies suggest mesh hernia repairs are safe in patients with IBD without significant post-operative complications. Although one systematic review showed that patients with Crohn's disease had a hernia recurrence rate of 27% and an overall higher incidence of postoperative complications than those without disease. Another study specifically noted that post-operative complications occurred in 31% of patients with IBD compared to 12% in the control population [2-6]. While incisional hernias and abdominal wall surgeries have a higher recurrence rate than when mesh is used, mesh introduces a foreign body, which can create adhesions, infection, and fistulas [7-9]. This can be especially dangerous in IBD patients who are already at a higher risk for these complications.

Conclusion

Given the limited data regarding long-term outcomes following elective surgeries in patients with IBD, this series aims to highlight these risks and encourage clinicians to exercise caution when considering elective procedures for this patient population.

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