

Case Report

Bassini's Repair of Incarcerated Inguinoscrotal Richter's Hernia with Perforated Cecum: A Century Old Technique Still Valid

Muenyi CS^{1*}, White M² and Choudhury N³

¹Department of Surgery, University of North Carolina Health Care Nash, USA

²College of Medicine, University of Tennessee Health Science Center, USA

³Department of Surgery, University of Tennessee Health Science Center, USA

Abstract

Incarcerated Richter's inguinal hernia with perforated cecum is very rare with only three case reports published. We present a case of a 63-year-old male who presented to the emergency room with 2 weeks history of right groin pain. Physical examination findings of a large right inguinoscrotal hernia without overlying skin changes, no abdominal pain or peritonitis. Laboratory values showed mild leukocytosis, hypokalemia, and lactic acidosis. CT abdomen and pelvis demonstrated right inguinoscrotal hernia containing terminal ileum and perforated cecum. He was taken emergently to the operation room for right groin exploration, exploratory laparotomy, ileocectomy and inguinal hernia repair using the Bassini's technique. Patient did well postoperatively and at 6 month follow up without hernia recurrence.

Keywords: Richter's hernia; Inguinoscrotal hernia; Bassini's tissue repair; Perforated cecum; Bowel perforation

Abbreviations

CT: Computer Tomography; WBC: White Blood Count

Case Presentation

Strangulated hernias are surgical emergency due to potential complications of bowel ischemia and abdominal catastrophe. Richter's hernias make up approximately 5% to 15% of strangulated hernias. Early diagnosis of incarcerated Richter's inguinal hernia remains challenging due to the lack of obstructing symptoms or peritoneal signs. There are only a few published case reports of incarcerated Richter's hernia containing perforated cecum [1-3]. We describe our experience with a case of incarcerated inguinoscrotal hernia containing terminal ileum and perforated cecum.

Patient is a 63-year-old male without significant past medical history who presented to Emergency Department with two weeks history of right groin pain and bulge after lifting heavy boxes at work. He denied obstructing symptoms or abdominal pain. Associated symptoms were nausea, vomiting, and diarrhea. His abdominal exam was benign without rebound tenderness, guarding, or peritonitis. He had a nonreducible, large right inguinal hernia extending to his scrotum, without overlying skin changes (Figure 1). CAT scan of

abdomen and pelvis showed right inguinoscrotal hernia containing terminal ileum with perforated cecum, moderate gas and fluid within the scrotum, without pneumoperitoneum or bowel obstruction (Figure 2B and C). Laboratory results were significant for leukocytosis, WBC 12.1; hypokalemia 2.8; and lactate of 3.1.

Patient was taken emergently to the operation for right groin exploration. Intraoperatively findings of incarcerated ileum, appendix, and cecum; the antimesenteric wall of the cecum was necrotic and perforated (Figure 2B). A lower midline incision was made to evaluate rest of the bowel, which appeared viable. An ileocectomy (Figure 2 A) was performed followed by stapled ileocolonic anastomosis. Due to the contamination from the necrotic cecum, a tissue repair of inguinal hernia using the Bassini's technique was performed. Starting from the pubic tubercle medially and suturing towards the deep inguinal ring, the conjoined tendon (transversus abdominis and internal oblique muscles) was approximated to the shelving edge of the inguinal ligament using 2-0 Prolene in an interrupted fashion (Figure 2C). Patient did well postoperatively and was subsequently discharged from the hospital. He was seen in clinic at 2 weeks, 3 months, and 6 months follow up and has been doing well with no evidence of hernia recurrence or groin pain.

Strangulated Richter's inguinal hernia containing perforated cecum is rare in the published English literature. The decision to use mesh versus tissue repair in a contaminated field is surgeon dependent based on the limited published cases. Canalli et al. [1] repaired Richter's hernia containing perforated cecum using synthetic mesh. Kromka et al. [2] did primary tissue repair using Bassini's technique for a patient with Amyand's hernia containing acute appendicitis and perforated cecum. Saurav performed exploratory laparotomy, primary cecal perforation repair and herniorrhaphy [3]. We present another rare case of a 63 year old male with inguinoscrotal hernia containing perforated cecum; ileocectomy was performed and hernia repaired primarily using Bassini's technique. The use of

Citation: Muenyi CS, White M, Choudhury N. Bassini's Repair of Incarcerated Inguinoscrotal Richter's Hernia with Perforated Cecum: A Century Old Technique Still Valid. *Am J Surg Case Rep.* 2024;5(2):1116.

Copyright: © 2024 Clarisse S Muenyi

Publisher Name: Medtext Publications LLC

Manuscript compiled: Feb 05th, 2024

***Corresponding author:** Clarisse S Muenyi, Department of Surgery, UNC Health Care Nash, 220 Nash Medical Arts Mall, Rocky Mount, NC 27804, USA, Tel: +1-502-974-5455; Fax: +1-252-962-8291



Figure 1: (A) Incarcerated right inguinoscrotal hernia without overlying skin changes. (B and C) CT abdomen and pelvis showing strangulated right inguinoscrotal hernia containing terminal ileum and perforated cecum with free air and fluid in the scrotum. No pneumoperitoneum or bowel obstruction.

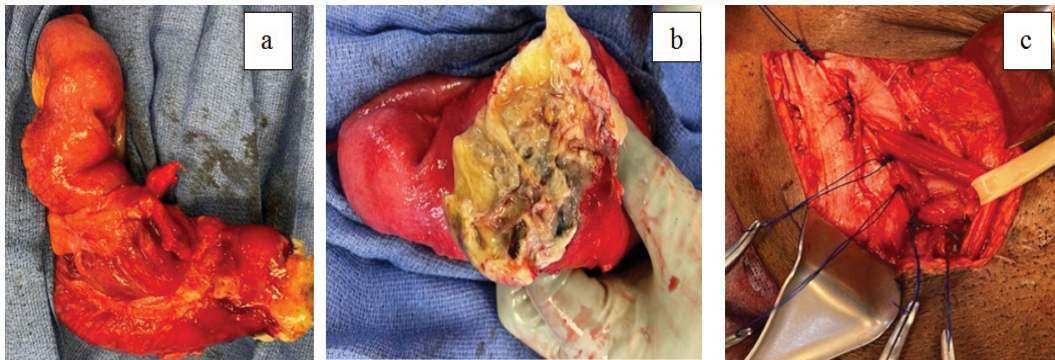


Figure 2: (A) Incarcerated terminal ileum and cecum. (B) Perforated and necrotic antimesenteric cecal wall. (C) Tissue repair of inguinal hernia using Bassini's Technique.

biologic or synthetic mesh in a contaminated field remains a topic for discussion. Although the risk of recurrence is higher with tissue repair techniques compared with using mesh, the risk of mesh infection and the cost effect associated with mesh repair should be taken into consideration [4].

Conclusion

Primary tissue inguinal hernia repair should be offered to patients' with strangulated inguinal hernia containing compromised bowel to prevent morbidity associated with synthetic mesh infection and negate cost of biologic mesh. It is important to expose surgical trainees in tissue-based groin hernia repair with increasing adoption of minimally invasive and mesh repair techniques in today's practice.

References

1. Cinalli M, Selvaggi F, Casolino V, Fiordaliso M, Farrukh M, Mucilli F, et al. Strangulated richter's hernia with caecum necrosis. Case report. *Ann Ital Chir.* 2021;92:S2239253X21036380.
2. Kromka W, Rau AS, Fox CJ. Amyand's hernia with acute gangrenous appendicitis and cecal perforation: A case report and review of the literature. *Int J Surg Case Rep.* 2018;44:8-10.
3. Jha S, Kandel A, Baral B, Ghimire P. Perforated Caecum in a Left-sided Amyand's Hernia: A Case Report. *JNMA J Nepal Med Assoc.* 2023;61(260):387-9.
4. Lockhart K, Dunn D, Teo S, Ng JY, Dhillon M, Teo E, et al. Mesh versus non-mesh for inguinal and femoral hernia repair. *Cochrane Database Syst Rev.* 2018;9(9):Cd011517.