

A Case of Richter Hernia: A Rare Entity

AUTHORS:

Kartik Katragadda, MD; Lauren M. DeStefano, MD; Dr. Kartik Katragadda
 Mohammad Farrukh Khan, MD

CORRESPONDENCE AUTHOR:

Dr. Kartik Katragadda
 1500 Lansdowne Avenue
 Darby, PA 19023
 Phone: (760) 520-9774
 Email: kartik.katragadda@mercyhealth.org

AUTHOR AFFILIATIONS:

Department of Surgery
 Mercy Catholic Medical Center
 Darby, Pennsylvania

Background	Richter hernia is the protrusion and/or strangulation (without obstruction) of only part of the circumference of the intestine's anti-mesenteric border through a rigid small defect of the abdominal wall.
Summary	An 88-year-old woman presented with a one-day history of abdominal pain, nausea, emesis, and diarrhea. Clinical evaluation revealed an afebrile, clinically stable woman with an approximately 8 cm tender bulge in the abdominal wall positioned in the infraumbilical region and lateral to the rectus muscle. Computed tomography (CT) scan with oral and IV contrast revealed a complex incisional hernia containing fat and the anti-mesenteric portion of the transverse colon. Due to concern for bowel ischemia on the arterial phase of imaging, the patient was taken for an emergent laparotomy. The necrotic bowel was excised, and a transverse loop colostomy was made. The patient's postoperative course was uncomplicated, and she was discharged on postoperative day four.
Conclusion	Richter hernia is a rare entity, but it has the potential for serious morbidity if not diagnosed in a timely fashion. Early detection and surgical treatment are paramount to improving outcomes in these patients. Providers and patients should also be educated on the signs of a Richter hernia to decrease the time to presentation.
Keywords	Richter hernia, strangulated hernia, bowel obstruction, gangrenous bowel, perforated bowel, anti-mesenteric

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Case Description

The patient, an 88-year-old female with a medical history of hypertension and a surgical history of multiple caesarean sections and a ventral hernia repair over 40 years prior, presented to the emergency department with complaints of abdominal pain, nausea, nonbloody, nonbilious emesis, and diarrhea for one day. Upon initial evaluation, she had a normal lactate level, no leukocytosis, and her vital signs were within normal limits. Computed tomography (CT) scan with oral and IV contrast was obtained, and this demonstrated an infraumbilical complex incisional hernia containing fat and the anti-mesenteric portion of the transverse colon that was abnormal in appearance, with concern for bowel ischemia on the arterial phase of imaging (Figure 1 and Figure 2).



Figure 1. Infraumbilical hernia containing fat and the anti-mesenteric portion of the transverse colon



Figure 2. Infraumbilical hernia containing fat and a portion of the transverse colon

The patient was taken emergently to the operating room, where she underwent an exploratory laparotomy, enterolysis, partial transverse colectomy, and a transverse loop colostomy. On entering the abdominal cavity, multiple midline defects were noted, along with one defect that tracked from the midline to the left abdominal wall, anterior to the fascia. This lateral defect contained a loop of bowel that was necrotic on the anti-mesenteric aspect and viable on the mesenteric aspect, which was recognized to be a Richter hernia. The necrotic bowel was excised and a transverse loop colostomy was made. The patient tolerated the procedure well, had an uncomplicated postoperative course, and was discharged home on the fourth postoperative day.

Discussion

In 1558, Fabricius Hildanus reported the first case of Richter hernia; however, it was not until 1778 that German surgeon August Gottlieb Richter gave his scientific description of this rare entity that would later adopt his name.¹ A Richter hernia occurs when the anti-mesenteric wall of the intestine protrudes, causing strangulation without obstruction.² They are most commonly diagnosed in patients 60 to 80 years of age and comprise up to 10 percent of all strangulated hernias.² These hernias can occur in prior incisions, but they are more commonly seen in small hernia rings large enough to trap a small portion of the bowel wall. The most common locations of presentation are femoral hernias (72 to 88 percent), followed by inguinal canal hernias (12 to 24 percent), and abdominal wall incisional hernias (4 to 25 percent).⁵ Because patients infrequently have obstructive symptoms, they tend to progress more rapidly to gangrene than is typically seen in other types of strangulated hernias. Repair is typically approached in the pre-peritoneal fashion, with a mandatory laparotomy and resection of bowel if gangrenous or perforated.

The silent nature of this hernia's presentation, and the fact that the patient continues to pass flatus and bowel movements, makes it particularly dangerous. By the time of presentation, there is typically ischemia of the affected bowel. Due to this ischemia, intestinal resection is mandatory. Not only is there morbidity and mortality due to the hernia, but there is also morbidity and mortality due to the bowel resection.

The necrotic bowel is not the only worrisome aspect of these hernias. There are also other complications, which have been described in the literature, including spontaneous fistulae from the affected bowel and necrotic skin.^{6-7,9} Additionally, there have been reports of atypical presentations of Richter hernias.^{8,10-11} Fluri et al. described Richter hernia as a complication of a colonoscopy.⁷ Another report described a case where a Richter hernia was misidentified as a groin abscess and was only later discovered upon exploration after feculent material started to drain from the “abscess.”¹¹ These examples demonstrate that there is no typical presentation of these hernias; vigilance is mandatory to reduce mortality and morbidity.

Conclusion

A Richter hernia is a rare entity that has the potential for serious morbidity if not diagnosed in a timely fashion. Early detection and surgical treatment are paramount to improving outcomes. Providers and patients should also be educated on Richter hernia symptoms to decrease the time to presentation.

Lessons Learned

Due to the presentation of our case, we feel that it is important to counsel patients on incisional hernias after their first surgery. It is also important for physicians to be aware of all of the ways that these hernias may present in order to prevent operative delay.

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