Large Spigelian Hernia: Case Report and Review of Literature

Bashir MU*, Sbeih MA, Weerasinghe D and Chua A

1Department of Surgery, Columbia University, USA
2Department of Surgery, Woodhull Medical Center, NYU Langone Medical Center, USA

Abstract

A Spigelian hernia is a lateral ventral abdominal hernia that occurs with protrusion of a viscus or preperitoneal fat through a defect in the aponeurotic layer between the lateral edges of the rectus abdominis medially and the semilunar line laterally. Spigelian hernias are relatively uncommon, and represent only 2% of all abdominal hernias. Due to their overall rarity and evasive presentation, Spigelian hernias and their associated complications are not well described in literature. We report here a rare presentation of a Spigelian hernia with large and small bowel strangulated portion in hernia sac, necessitating emergent laparotomy with bowel resection and repair of the hernia defect.

Keywords: Spigelian hernia; Cecum; Laparotomy; Abdomen

Introduction

A spigelian hernia is the result of an anterior abdominal wall defect. A spigelian hernia results from protrusion of a viscus or preperitoneal fat through a defect in the transversus abdominis muscle, it occurs laterally to the lateral border of the anterior rectus sheath along the semilunar line, where a transition from muscle to aponeurosis occurs. Spigelian hernia management is a challenge to general surgeons. Elective repair of uncomplicated Spigelian hernias can be performed both laparoscopically and by an open technique, with the former reported to be associated with a lower morbidity and shorter hospital stay [1,2]. However, an open approach is more feasible in emergent presentations associated with viscus incarceration, as this prevents undue delays and rapid reduction with possible revival of ischemic tissues, as well as reduction of the rate of iatrogenic bowel injury during trocars insertion for the laparoscopic approach. This case report will present an open repair performed in an emergent situation for incarcerated large spigelian hernia.

Case Presentation

A 49 year-old Hispanic female presented to the emergency department with a 12 hours history of progressively worsening right lower quadrant pain with multiple episodes of nausea and vomiting and associated abdominal distention. The pain was reported to be severe and persistent with no radiation. Further pertinent history included four pregnancies and a surgical history of a caesarean section about 20 years ago.

On examination, she had a weight of 73 kg with a BMI of 31 kg/m2. Physical examination revealed a well-developed female in acute distress due to abdominal pain. Her blood pressure was 102/59 but other vital signs were within normal limits. Abdominal exam revealed a distended abdomen with severe tenderness in the right lower quadrant; a non-reducible firm and tender mass measuring 10 cm x 10 cm was also palpated in the right lower quadrant, and bowel sounds were found to be hypoactive. A CT scan of the abdomen revealed a spigelian hernia in the right lower quadrant containing a dilated cecum (up to 7.1 cm) with collapse of proximal bowel loops, suggesting mechanical small bowel obstruction (Figure 1,2). Based on the above history and corresponding radiographic findings, a diagnosis of incarcerated Spigelian hernia was established.

After resuscitation, patient was taken to the operating room for exploratory laparotomy and hernia repair. Intraoperatively, the hernia sac was first approached through a gridiron incision and dissection was continued until the hernia sac containing the strangulated cecum was visualized. The cecum and adjoining portion of the ascending colon as well as the terminal ileum were found to have wall necrosis. Thereafter, a right hemicolectomy was performed via a separate midline incision including the distal necrotic portion of the ileum in the resected specimen; a primary ileocolic...
Spigelian hernias present mostly with abdominal pain and a palpable mass in the area of the hernia [3,5]. Incarceration with spigelian hernias has been reported in 10-24% of patients with symptomatic spigelian hernia, with the hernia sac usually containing a portion of the omentum [3,6]; other visera that have been reported to be involved include the colon, appendix, ovaries, testes and the small intestine [6-8]. A pertinent clinical exam and an abdominal US may both assist in the work up of a Spigelian hernia, however a CT scan is the most definitive test in establishing a diagnosis of a spigelian hernia [6,7]. Further, a CT scan also assists in defining the anatomy of the hernia sac and any associated complications such as mechanical obstruction.

The management of Spigelian hernias is almost always surgical, with a low recurrence rate after surgical repair [3,5]. Elective repair of uncomplicated Spigelian hernias can be performed both laparoscopically or by an open technique, with the former reported to be associated with a lower morbidity and shorter hospital stay [9]. However, an open approach is more feasible in emergent presentations associated with viscus incarceration, as this prevents undue delays and rapid reduction with possible revival of ischemic tissues, as well as reduction of the rate of iatrogenic bowel injury during trocars insertion for the laparoscopic approach. In our patient, an open approach to the hernia allowed optimal exposure in a timely fashion, although the involved portion of the bowel was beyond salvage. Nevertheless, reduction of the hernia contents expeditiously prevented further necrosis and a primary anastomosis with healthy viable margins was achieved.

Conclusion

Spigelian hernias are rare disorder that results from acquired or congenital factors results in defect in the transversus abdominis muscle in anterior abdominal wall and subsequent protrusion of visceral content through the hernia defect. Spigelian hernias carry a significant risk of incarceration and strangulation of sac content. Clinical presentation is often vague, leading to delayed diagnosis. A thorough physical examination along with high clinical suspicion remains crucial in the diagnosis of the Spigelian hernia; additionally, CT scan is the most definitive radiologic test in establishing a diagnosis of a spigelian hernia [6,7]. The management of spigelian hernias is almost always surgical, with a low recurrence rate after surgical repair [3,5]. Spigelian hernias can be repaired in a traditional open fashion or laparoscopically. Multiple intra-abdominal organs have reportedly been found in spigelian hernias, but the presence of a cecum is very rare. Early prompt surgical intervention prevents catastrophic complications of incarcerated spigelian hernias.

References


