

Unusual Disappearing Abdominal Bump: Spigelian Hernia

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ABSTRACT

Spigelian hernia is a rare surgical entity. The presentation is nonspecific, and the diagnosis is evasive if a high index of suspicion is not maintained, more so in obese patients. Contrast enhanced computed tomography (CECT) is the imaging modality of choice. Ultrasound is less specific with high false negative rate especially in obese patients. Though these hernias are managed by both open and laparoscopic approaches, the optimal mode of management is still controversial. We present a case of spigelian hernia and discuss its diagnosis and management strategies.

INTRODUCTION

Spigelian hernia is an uncommon hernia comprising 0.1-2% of all abdominal wall hernias. More than 90% of hernias occur in the spigelian hernia belt, where the spigelian aponeurosis is widest (1). Diagnosis is often delayed and plagued by nonspecific symptoms and signs, thus mandating a high index of suspicion (2). In addition, the risk of strangulation is high because of the unyielding fascial defect that these hernias course through. Once detected all these hernias must undergo surgical repair. The approach to hernia is either open or laparoscopic with its own advantages and disadvantages. □

CASE REPORT

A 40-year-old obese lady presented with complaints of constant dragging abdominal pain and a lump in the left lower part of the abdomen for last one year. She reported that abdominal lump became more prominent with straining and standing while it disappeared on lying down. She never had any previous abdominal surgery. She denied having any other bladder or bowel complaints. Physical examination revealed a reducible swelling in the left lower quadrant of the abdomen below the umbilicus and lateral to the rectus muscle (Figure 1). Computed tomography (with oral and intravenous contrast) of the abdomen revealed left interparietal spigelian hernia (Figure 2). The

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patient was advised open preperitoneal mesh hernioplasty. A transverse incision was made through the skin and subcutaneous tissue over the mass. The aponeurosis of the external oblique muscle was incised along the direction of its fibres. A hernia sac 4 x 3 cm in size was seen protruding through a defect in the transversus and internal oblique muscles. This was immediately lateral to the semilunar line and below the semicircular line of Douglas. The sac contained bowel loops. The contents were reduced and the sac was closed. After placing the polypropylene mesh in the preperitoneal space, the defect in the transversus and internal oblique muscles were approximated. The aponeurosis of the external oblique muscle was closed in interrupted fashion with polypropylene sutures. The patient was discharged on the third post-operative day in satisfactory condition. There is no evidence of recurrence after one year of follow-up. □

DISCUSSION

Spigelian hernia is a rare ventral hernia which occurs through a slit like defect in the anterior abdominal wall close to the arcuate line of Douglas adjacent to the lateral border of the anterior rectus sheath along the semilunar line (1). The semilunar line was first described by an anatomist from Brussels, Adrian van der Spigel, and it goes by his name. However, it was Klinkosh, who in 1764, described hernias occurring through this region and named them spigelian line hernias. Various synonyms like

spontaneous lateral ventral hernia, joint tendon hernia, semilunar hernia and ventral interstitial hernia have been used to describe spigelian hernias (3). The hernia ring is a well-defined defect in the transverses aponeurosis. Most of spigelian hernias occur in the lower abdomen where the posterior sheath is deficient. The hernial sac, surrounded by extraperitoneal fatty tissue, is often interparietal passing through the transversus and the internal oblique aponeuroses and then spreading out beneath the intact aponeurosis of the external oblique (2). In this space, the hernia can expand easily, and acquires the typical T- or mushroom shaped appearance. It may further expand laterally toward the anterior superior iliac spine and the groin. The fusion of the external oblique aponeurosis with the deeper layers to form the rectus sheath prevents medial expansion of the hernia.

Regarding etiology, most cases are acquired. The spigelian aponeurosis is itself one of the congenital weak areas in the anterior abdominal wall. Other predisposing conditions include raised intraabdominal pressure such as obesity, chronic obstructive pulmonary disease, multiparity, constipation and ascites. Previous abdominal surgeries and peritoneal dialysis have also been implicated (3). The musculo-aponeurotic fasciculation theory defended by Zimmerman et al is the most accepted theory for the origin of Spigelian hernias (4).

The diagnosis is often delayed because of nonspecific symptoms and the lump may not be discernible on physical examination. A high level of suspicion, therefore, is warranted as the risk of incarceration/ strangulation is high because of the unyielding nature of the fascial defect. CT scan is the imaging modality of choice. Ultrasound can also establish the diagnosis but is less specific than CT, and the false negative rate is high in obese patients. The use of imaging has ranged from 30% to 100% in different series (2). In difficult cases, MRI and diagnostic laparoscopy have their role (1).

The treatment of Spigelian hernia is surgical repair in view of high risk of incarceration/ strangulation. Controversy abounds regarding the optimal surgical approach in the management of these hernias. The principles of classic open approach are same as for any other hernia repair. Here, the options include primary repair, or mesh repair in cases of wide defect or atrophic aponeuroses. It is the procedure most



FIGURE 1. Clinical photograph of the patient.

frequently done in cases of emergency surgery (2). The use of prosthesis is discouraged if there is contamination fearing the risk of infection in the prosthesis (4). Laparoscopic technique entails two approaches – a transabdominal and a totally extraperitoneal approach. In a prospective randomized trial, the totally extraperitoneal laparoscopic approach has been purported as the technique of choice in cases of elective repair. The transabdominal approach converts a parietal surgery into an intracavitary surgery with the added risk of postoperative obstruction and bowel fistulization if an intraperitoneal mesh is placed (5). Others have claimed that open approach with or without mesh gives equally good results (6). Moreover, the laparoscopic approach requires a learning curve. Considering the rarity of these hernias, the learning curve may be long. Hernia repair may be done using either open or laparoscopic technique. Laparoscopic approach results in less infection rate, early resumption of daily activities, less postoperative pain, and specially avoids opening the external oblique aponeurosis and therefore a reduction in the risk of recurrence (3).

To conclude, the optimal surgical approach in the management of spigelian hernias is still evolving. The open approach with or without mesh is the procedure of choice in complicat-

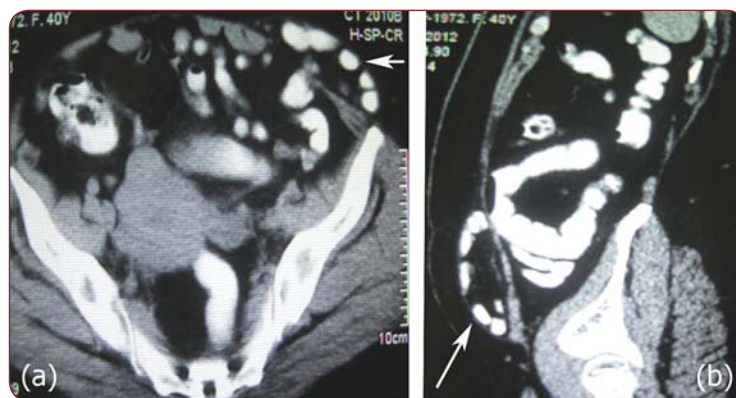


FIGURE 2. (A) Axial section (B) Sagittal section of computed tomography scan of abdomen with oral contrast. White arrow depicts the left sided hernia sac protruding through the transverses abdominis, internal oblique, and contained within external oblique muscles.

ed cases and where laparoscopy is not available. The totally extraperitoneal laparoscopic technique is promising in cases of elective repair, but considering the rarity of hernia itself, the learning curve is a disadvantage. Spigelian hernia remains an enticing entity because of its rarity, the concealed nature of its symptoms and the varied approach to its management.



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