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Spigelian Hernia: About a Case and Review of the Literature at the General Surgery Department of the Koundara Prefectural Hospital

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ABSTRACT

Spiegel hernia corresponds to the protrusion of a peritoneal sac through an acquired or congenital opening in the semilunar line of Spiegel. It is a rare form, accounting for between 0.1 to 1% of abdominal wall hernias. Ultrasound and especially CT scan are useful for diagnosis. We report the case of a 70-year-old patient, presenting with a left para-rectal mass above and below the umbilicus, gradually increasing in size, without bowel disturbances and without general health deterioration. An ultrasound suggested a left Spiegel hernia. A simple suture was performed after reintegration of the sac's contents, followed by its resection. The postoperative course was unexpected with a 2-year follow-up.

Keywords

Diagnosis, Spiegel hernia, Treatment, Koundara.

Introduction

Spiegel hernia corresponds to the protrusion of a peritoneal sac through an acquired or congenital defect in the Spiegel semilunar line [1]. It is a rare form, accounting for between 0.1% to 1% of abdominal wall hernias [2,3]. The diagnosis is clinical but is sometimes difficult due to the small size of the mass as well as the particular location [1,4]. The clinical presentation, often polymorphic, can lead to diagnostic delays. Ultrasound and especially CT scans are useful for diagnosis [2,4]. The treatment of Spiegel hernia is strictly surgical. It may consist of the placement of synthetic material or a fascial repair [2,3]. We describe a clinical case in a 70-year-old man who presented with a non-strangulated left-sided Spiegel hernia, treated through a lateral approach.

Observation

We report the case of a 70-year-old patient, a farmer, who has been presenting for 3 years with a left pararectal mass above and below the umbilicus, gradually increasing in size, without bowel disturbances or general health deterioration. The general examination found a patient who was hemodynamically and respiratoryily stable. On abdominal examination, a swelling of about 25x12 cm was noted on the left flank, corresponding to the linea semilunaris of Spiegel, soft, reducible, and expanding with a cough effort, without any signs of inflammation (Figure 1).

Figure 1: Left pararectal swelling.

The other hernial openings were clear. An abdominal ultrasound showed the presence of a hernia located at the lateral edge of the left rectus muscle, developing through an opening in the aponeuroses of the internal oblique and transverse abdominal

muscles, containing intestinal content through a parietal defect of 8 cm, consistent with a left Spigelian hernia. The diagnosis of a non-strangulated Spigelian hernia was made. Surgical exploration, by elective approach, found an 8 cm hernial sac with a wide neck of 7 cm located at the junction of the lateral edge of the rectus abdominis and the left transverse abdominal muscles (Figure 2).

Figure 2: Hernial sac measuring 8cm with a wide neck of 7cm.

Figure 3: The sigmoid colon was the content of the sac and in good condition.

Figure 4: Repair of the parietal defect by running suture with Vicryl1.

The immediate postoperative course was uncomplicated, and the patient was discharged on the second postoperative day.

Discussion

Spiegel hernias are rare and correspond to the protrusion of a peritoneal sac through an acquired or congenital anatomical opening of the Spiegel line, located at the intersection of the transverse and oblique abdominal muscle fibers on the lateral edge of the rectus abdominis [1,5]. This weak point is limited inferiorly by the inferior epigastric artery. Spiegel hernias are initially situated behind the rectus abdominis muscle and protrude at its outer edge, following an oblique path forward and outward. The peritoneal sac gradually slides under the arcuate line. Most hernias thus occur at the Spiegel belt line, a 6 cm-high zone located between the umbilicus at the top and a line passing through the anterior superior iliac spines at the bottom [5,6]. Their incidence is clearly increasing due to improvements in modern imaging techniques. Spiegel hernias can occur at any age, with a peak between 40 and 70 years. They affect both women and men [2,4,7]. They may be secondary to certain factors such as collagen disorders, aging, obesity, rapid weight loss, multiple pregnancies, chronic obstructive pulmonary diseases, trauma, and a history of surgery [2,8].

In our case, the neck of the hernia was very wide, which could explain the absence of strangulation or incarceration up to the time of management. In most cases, the hernial sac contains the omentum, small intestine, cecum, appendix, or sigmoid colon [3,4]. Some authors typically report a contents such as the stomach, gallbladder, Meckel's diverticulum, an ovary, a uterine fibroid, or an endometriotic nodule [4,6]. In our case, the content of the hernial sac was the sigmoid colon. The treatment of Spigelian hernia is strictly surgical [4], usually through a lateral approach. Midline laparotomy is indicated only in cases of hernia strangulation, allowing easier manipulation of the hernial contents and a complete exploration of the abdominal cavity [4,9]. Currently, the laparoscopic approach is a new option that allows treatment of the hernia and placement of a mesh if the local condition permits [10]. In the therapeutic arsenal, muscle flap reconstructions provide an alternative. However, they may lead to functional deficits and increase the risk of developing lumbar weakness hernias [9,10].

Surgical treatment may involve the placement of synthetic material or a parietal repair. The rarity and high cost of the prosthesis, in our context, led us to prefer hernia repair through parietal suture. The aponeurotomy allowed us to achieve sufficient parietal strength and prevent recurrence.

Conclusion

Spigelian hernia is a rare condition. It is often unknown and its clinical diagnosis is difficult in the absence of an obvious abdominal mass. Imaging, namely ultrasound and especially CT scans, is useful for diagnosis. In our context, the clinical signs and ultrasound were sufficient for the diagnosis of Spigelian hernia, and the treatment was surgical, consisting of aponeurorrhaphy, which allowed for adequate parietal strength and prevention of recurrence.

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