

CASE SERIES

Spigelian Hernia-Our experience

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ABSTRACT

Background: A Spigelian Hernia is a very rare hernia which develops through the aponeurotic layer between the rectus abdominal muscles medially and the semilunar line laterally.

Aim: The aim of this study is to understand the clinical presentation and management of this rare hernia.

Methods: This study was conducted over a period of five years in the department of surgery Skims Medical College Srinagar and included all the patients diagnosed as Spigelian Hernia.

Results: During our study, we encountered only four cases of spigelian hernia, which included three females and one male.

Conclusion: The Spigelian hernia is a very rare hernia seen in adults and usually there is no notable swelling on examination. Although they are rare there is a high risk of strangulation. JMS 2018; 21 (2):114-116

Keywords: Spigelian hernia, spigelian fascia.

INTRODUCTION

A Spigelian hernia (or lateral ventral hernia) is a hernia through the spigelian fascia which is the aponeurotic layer between the rectus abdominal muscle medially, and the semilunar line laterally.^[1,2] There is a common misconception that they protrude below the arcuate line owing to deficiency of the posterior rectus sheath at that level, but in fact, the defect is almost always above the arcuate line. They are generally interparietal hernias, meaning that they do not lie below the subcutaneous fat but penetrate between the muscles of the abdominal wall, therefore, there is often no notable swelling. Spigelian hernias are usually small, therefore, the risk of strangulation is high. Most occur on the right side between 4th - 7th decades of life. Compared to other types of hernias they are rare.^[2-5]

METHODS

This study was conducted over a period of five years in the department of surgery SKIMS medical college Srinagar from May 2012 to April 2017 and included all the patients diagnosed as spigelian hernia. During our study we managed only four cases of spigelian hernia, which

included three females and one male. The case details of all the four cases is summarized below.

Case No.1:

A 55-year female presented to us with a history of pain on the lateral aspect of the right subcostal area for more than one year. The pain used to get aggravated when she lied on the right side. She also gave a history of very small swelling on the same side which used to come and go. On examination there was no definite swelling as such, however, there was only a positive cough impulse. Ultrasonography was done which revealed a 3 cm defect in the spigelian fascia with features consistent with hernia. CT was done which confirmed the findings of ultrasonography (Table 1)

Table 1: Clinical details of study subjects.

	Case 1	Case 2	Case 3	Case 4
Gender	Female	Female	Male	Female
Age	55 Years	43 Years	50 Years	37 Years
History	pain on the lateral aspect of the right subcostal area	occasional swelling, mild discomfort on the lateral aspect of right subcostal area	vague discomfort/ Swelling on left lateral costal area	small compressible swelling on the lateral aspect of the right thoracic-lumbar area
Duration	1 Year	6 Months	2 Years	1 Year
Investigations/ Findings	Ultrasonography with 3 cm defect in the spigelian fascia	Ultrasonography with 3-4 cm defect in the spigelian fascia	Ultrasonography with 3-4 cm defect in the spigelian fascia	Ultrasonography with 4 cm defect in the spigelian fascia

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Case No. 2:

A 43-year female presented to us with a history of occasional swelling and mild discomfort on the lateral aspect of the right subcostal area for about 6 months. The swelling used to come and go. The pain used to get aggravated when she lied laterally. On examination, the only finding was a positive cough impulse on the right costal area medial to the semilunar line. Ultrasonography was done which revealed a 3-4 cm defect in the spigelian fascia with features consistent with hernia. CT abdomen revealed the same findings.

Case No. 3:

A 50-year male presented to us with a vague discomfort on left lateral costal area and a swelling in the same area, which used to appear only with a cough. The duration of symptoms was almost 2 years. Initially patient ignored the discomfort, but over a period of time discomfort increased which forced him to consult a clinician. On examination, there was no definite swelling except for the positive cough impulse. Ultrasonography was advised which revealed a 3-4 cm defect in the spigelian fascia along with a hernia sac. Computed tomography was done, which showed findings suggestive of a Spigelian hernia.

Case No. 4:

A 37-year female presented to us with a history of small compressible swelling on the lateral aspect of the right thoracic-lumbar area for more than 1 year. There was no history of any pain in that area. On examination, there was a positive cough impulse. Ultrasonography was done which revealed a 4 cm defect in the spigelian fascia with features suggestive of a hernia, which was further confirmed on computed tomography.

Management:

Patients were subjected to various baseline investigations and in view of persistent discomfort, all the patients were taken for exploration under spinal anesthesia. Before the patients were operated, the site of cough impulse was marked. A transverse incision was made. All the layers were incised till the muscle layer was reached. After splitting muscles, a defect in spigelian fascia was identified (Fig. 1). A very thin sac with a positive cough impulse was seen in all the cases (Fig.2). The defect was closed using 2-0 prolene. This was followed by placing a prolene mesh on the muscle thereby covering the whole defect. The incision was closed back in layers. The patient was followed for at least one year. Recurrence was not seen in any of the patients till date.



Fig. 1: Well defined defect in the Spigelian Fascia



Fig. 2: Hernial sac as seen on cough impulse

DISCUSSION

Spigelian hernia can be congenital or acquired.^[5,6-9] In most of the cases, a perforating vessel weakens the spigelian fascia and a small amount of fat enters through that weak area which gradually leads to hernia formation. Any condition which causes stretching of the abdominal wall can lead to such hernias. These may include obesity, multiple pregnancies, previous surgery or scarring. It is also believed to be one of the complications of chronic ambulatory peritoneal dialysis.^[10]

The diagnosis of a spigelian hernia is difficult, as it has no characteristic symptoms. Less than 50% of patients are diagnosed preoperatively. A hernia may be interparietal with no obvious swelling on inspection or palpation.^[11,12] In other cases the patients may present with a swelling adjacent to the iliac crest in a standing position which disappears on lying down. Rarely the hernia can enter the rectus sheath and can be confused with spontaneous rupture of rectus muscle or with a hematoma in the rectus sheath.

Ultrasound is recommended as the first line of investigation.^[8] Ultrasonic examination of the semilunar line should be done in all patients with vague abdominal pain associated with bulging of the abdominal wall in the

standing patient. The advantages of ultrasonography are that examination of the patient can be performed in both supine and upright positions, while the patient performs a valsalva maneuver. Although CT scanning with thin sections is now considered the most reliable technique to make the diagnosis in doubtful cases, magnetic resonance imaging (MRI) may also have benefit in such cases.^[13] The use of oral contrast medium during the examination is recommended so that any bowel content can be identified.

Surgery can be performed either by open technique or by laparoscopically. The first intra-abdominal laparoscopic repair of spigelian hernia was performed by Carter and Mizes in 1991^[1]. Initially only sutures were used to close the defect but now mesh is placed either extraperitoneally or intraperitoneally after creating a peritoneal flap by transabdominal approach.^[13] Laparoscopic repair has a significant advantage in terms of morbidity and hospital stay over an open approach.^[10,14,15]

The advantage of extra-peritoneal placement of mesh over trans-abdominal approach is that we need not to enter peritoneal cavity and prolene mesh can be used, which decreases the cost of the procedure and also decreases the complications like intestinal obstruction and fistulization of bowel which may be seen with the intraperitoneal approach.^[5,6] The need to close the peritoneal flap with tacks or sutures in trans-abdominal approach increases the operative time and cost.

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