



A Rare Case Of Spigelian Hernia.

Corresponding Author:

Dr. Dnyanesh Belekar,
Associate Professor & Unit Head, K J Somaiya Medical College & Research Centre, Ayurvihar, Sion, Mumbai,
400022 - India

Submitting Author:

Dr. Dnyanesh Belekar,
Associate Professor & Unit Head, K J Somaiya Medical College & Research Centre, Ayurvihar, Sion, Mumbai,
400022 - India

Submitted on:20-Feb-2014, 09:12:49 AM GMT

Accepted on:15-Mar-2014, 05:50:11 AM GMT

Published on:21-Mar-2014, 08:23:42 AM GMT

Article ID: WMCPLS00149

Article Type: Case Report

Article URL: http://webmedcentralplus.com/article_view/doi:10.9754/journal.wplus.2014.00149

Subject Categories:GASTROENTEROLOGY

Keywords:Acute,Spigelian,Hernia

How to cite the article:

Belekar D, Vaishampayan AR, Singh SB.A Rare Case Of Spigelian Hernia.. *WebmedCentral plus*
GASTROENTEROLOGY 2014;5(3):WMCPLS00149

Source(s) of Funding:

None

Competing Interests:

None

A Rare Case Of Spigelian Hernia.

Author(s): Belekar D, Vaishampayan AR, Singh SB

Abstract

Spigelian hernia is a type of interparietal abdominal wall hernia. This is usually present at the level of Arcuate line in the area of 'Spigelian belt'. Good clinical examination can detect this entity. So far only 1000 cases have been reported in surgery literature. Acute presentation is seen in few of such hernias. Here we report this interesting case of acute variant of Spigelian hernia in young adult female as a rare entity among all external abdominal wall hernias.

Introduction

Spigelian hernia is a protrusion of preperitoneal fat, a sac of peritoneum or an organ, through a congenital defect or weakness in the Spigelian fascia. It is essential to recapitulate the anatomy of the anterior abdominal wall to properly understand Spigelian hernia.

We report this rare variety of hernia, found in one of our patients, with review of literature to discuss the diagnosis and management, as such kind of hernias are clinically elusive with fatal outcome if ignored.

Case History

31 years old lady presented with history of colicky abdominal pain associated with nausea and a palpable lump at the left lower quadrant of the abdomen. She denied any alterations in her bowel habits. She had similar complaints 3 months back, which resolved spontaneously and she was thoroughly investigated then. Abdominal ultrasonography and other investigations were all normal at that time and she was treated conservatively in view of simple intra-abdominal infection.

On clinical examination, patient was conscious, co-operative, well oriented in time, place and person, averagely built and averagely nourished. Pulse was 96beats /min. Blood pressure was 100/70 mm of hg. She was afebrile. On per abdominal examination, she had a 6 cms x 4 cms x 2 cms well demarcated swelling at the level of Arcuate line along Spigelian belt was visible. It was reducible with positive cough

impulse. The swelling was non tender and without any raised temperature. Rest of hernial orifices were within normal limits (WNL). Opposite side was normal. No inguinal lymph nodes were palpated. Rest of systemic examination was WNL. On the basis of clinical examination and its anatomical location clinical diagnosis of a reducible Spigelian hernia was made.

Her routine investigations were WNL. X-ray abdomen did not show any air-fluid levels to suggest intestinal obstruction. X-ray abdomen was done to rule out any other causes of recurrent colicky abdominal pain like obstruction/renal stones. Pre-operative ultrasonography supported our clinical diagnosis of Spigelian hernia however Computed tomography scan was not done due to financial constraints.

After adequate preparation, she was explored under spinal anesthesia by an oblique incision over the swelling and was found to have herniation of small bowel which was viable and healthy, through a defect along the lateral border of rectus sheath. The defect was small measuring 2.5 cms in length, thus a decision to offer an anatomical repair in view of small defect was taken and it was repaired with prolene 2/0 suture horizontal mattress type.

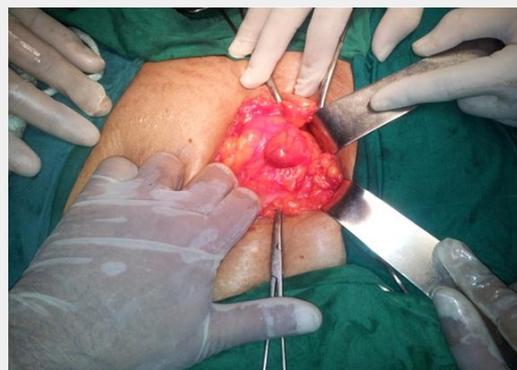


Figure 1: Hernial sac protruding out through the defect



Figure 2: Bowel loops seen as contents of hernial sac

Post operatively the patient had an uneventful recovery. She was healthy when seen in the surgical outpatient department 4 weeks after her surgery. She followed up in our surgical outpatient department about 3 months after surgery when her clinical examination was unremarkable.

Discussion

Spigelian hernias are rare interparietal hernias. Adriaan Van der Spiegel was first to describe the semilunar line and hence the hernia got its name. Henry-Francis Le Dran described spontaneous rupture along the semilunar line in 1742, but Josef T.K. Linkosch was first to refer this condition as a hernia in 1764.¹ Spigelian hernias are rare accounting for 1-2% of all hernias. Females have a higher preponderance than males. Spigelian line marks the transition from muscle to aponeurosis in the transverses abdominis muscle of the abdomen. It is a lateral convex line between the costal arch and the pubic tubercle. The part of the aponeurosis that lies between the semilunar line and lateral border of the rectus muscle is called the Spigelian fascia/ Spigelian Belt. Anteriorly throughout its length, the semilunar line is reinforced by the aponeurosis of the external oblique. Posteriorly in the cephalad two thirds it is reinforced by the transversus abdominis muscle which is muscular almost to the midline in the upper abdomen. This support prevents herniation and hence very rare above the umbilicus.

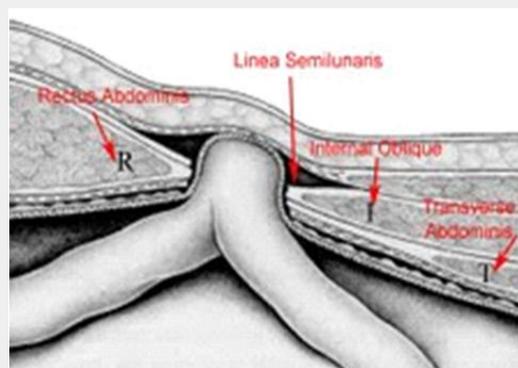


Figure 3: various anatomical planes at the site of spigelian hernial protruberance

Spigelian hernia is defined as a protrusion of preperitoneal fat, a sac of peritoneum or an organ, through a congenital defect or weakness in the Spigelian fascia¹ It is usually located between the different muscle layers of the abdominal wall; therefore it is also called as inter-parietal, interstitial, inter-muscular, intramuscular or intra-mural hernia. The majority of Spigelian hernias are found in a transverse band lying 0-6 cms cranial to a line running between both anterior superior iliac spines referred to as the spigelian hernia belt where the Spigelian fascia is the widest² Hernias that penetrate the spigelian fascia within the Hasselbach's triangle (bounded by rectus abdominis muscle medially, inferior epigastric artery laterally and by inguinal ligament inferiorly) caudal and medial to the inferior epigastric vessels are called low Spigelian hernias. Most Spigelian hernias occur below the level of the umbilicus close to the level of the arcuate line (inferior margin of posterior leaflet of rectus sheath within the abdomen), though they have being reported to occur above the level of the umbilicus. Incisional hernias presenting through the Spigelian fascia or line are conventionally not considered as true Spigelian hernias, though some authors have described them as Spigelian hernias³

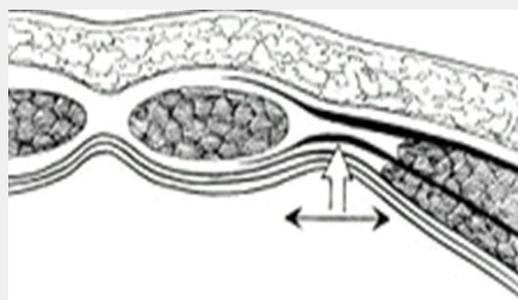


Figure 4: Typical anatomical site of Spigelian hernia in coronal section

Clinical examination forms the mainstay of diagnosis. In its earliest form it is simply a protrusion of preperitoneal fat through the Spigelian aponeurosis. The hernia can also be part of an extra peritoneal organ, but a peritoneal sac is found in most of the cases. If the peritoneal sac has content, it is usually greater omentum, small intestine, or part of the colon. Spigelian hernias are rarely known to contain an acutely inflamed appendix, Crohn's appendicitis, even an incarcerated Meckel's Diverticulum⁴ Bilateral Spigelian hernias are still rare. Richter type of Spigelian hernia has also been reported. Such type of hernias have also been reported following laparoscopic procedure, through a pre existing fascial weakness, that became manifested as a result of the pneumoperitonem⁵

The symptoms that cause a patient to consult a physician are usually abdominal pain, a mass in the anterior abdominal wall or signs of incarceration with or without intestinal obstruction. The pain varies in its type, severity and location depending on the content of the hernia. Pain can often be aggravated by manoeuvres, that increase intra abdominal pressure and is relieved by rest. If the hernia produces a palpable mass along the Spigelian aponeurosis the diagnosis is generally easy to make provided the possibility of this hernia is considered. Patients, who do have pain, but have no visible or palpable mass present the greatest difficulty in diagnosis. This condition exists when the hernial sac content is reduced at the time of examination or when a small inter-parietal hernia cannot be detected on palpation. Thorough Physical examination should be carried out while the patient alternately tenses and relaxes the abdominal muscles. When the abdominal muscles are tensed all patients with Spigelian hernias have a tender spot over the hernial orifice in the Spigelian aponeurosis.

On palpation, the hernia is pressed against the ring which is firm when the intra-abdominal pressure is raised. This finding is not pathognomonic of spigelian hernia but offers a useful method for screening. Plain abdominal x-rays are not particularly sensitive in diagnosing spigelian hernias. X-ray abdomen is done to rule out any other causes of recurrent colicky abdominal pain like obstruction/renal stones. This hernia is uncommon and clinical diagnosis can be difficult. The appearance of the lesion is comparable with others in and around the abdominal wall, including rectus sheath hematoma, seroma, parietal abscess, lipoma, peritoneal tumor implants and pseudocyst at the end of the ventriculo-peritoneal shunts. Clinical and sonographic differentiation is

emphasized. Ultrasonic scanning is now a valuable diagnostic tool in both palpable and non palpable spigelian hernias. It is rapid, accurate, non invasive and easy to perform.

Spigelian hernias present in two variants -Acute and chronic/incidental. In first type patient presents as acute abdomen. Patient requires urgent investigation and surgical treatment at the earliest. In second type this entity is diagnosed incidentally while investigating recurrent abdominal pain. In our case patient presented with acute variant and underwent surgery at the earliest.

All radiological investigations are done to support the clinical diagnosis and it should not replace gross clinical examination. Only in special circumstances like morbidly obese patients these are useful. A CT scan is only required if there is a doubt in making the diagnosis. A Spigelian hernia may be confused with a lipoma or a parietal abscess⁶

Various surgical options have been recommended to treat spigelian hernia. Spangen recommended simple closure of the defect in the form of hernioraphy. Nozoe ET al⁷ performed a simple hernioplasty by suturing the internal oblique and transversus muscles to the rectus sheath. Development of mesh and concept of tension free application to other hernias by Liechtenstein led to its use by many for spigelian hernias. The advent of laparoscopy has made these conventional approaches old-fashioned in experienced hands⁸ Spigelian hernias are ideally suited to preperitoneal laparoscopic repair because the defect in the Spigelian aponeurosis is more clearly identified in the preperitoneal plane. The best results are offered by the extra peritoneal laparoscopic approach⁹ Spigelian hernias are clinically elusive often until strangulation occurs. Ultrasound examination of the semi lunar line is simple and accurate method of diagnosis. Surgery should always be advised anticipating the complications it is prone to undergo. Apart from the discomfort these hernias cause, they strangulate frequently and hence should be repaired at the earliest.

References

1. Spangen L. Spigelian hernia, Surg Clin North Am 1984; 64:351-66.
2. Ray NK, Sreeramulu PN, Krishnaprasad K. Spigelian hernia: Fascia lata repair is an alternative option in absence of prolene mesh. JIMA-June 2002, 100:370-1.
3. Rehman JM, Seow CS, O'Dwyer PJ. A case of a spigelian hernia at an unusually high anatomical

location. *R Coll Surg Edin* 2000; 45:196-7.

4. Lin PH, Kofforon AJ, Heilizer TJ, Lujan HJ. Right lower quadrant abdominal pain due to appendicitis and an incarcerated Spigelian hernia. *Am Surg* 2000; 66:725-7.

5. Slakey DR, Teplitsky S, Cheng SS. Incarcerated Spigelian hernia following laparoscopic living-donor nephrectomy. *JLS* 2002; 6:217-19.

6. Raveenthiran V, Pichumani S. Richter's hernia in spigelian hernia. *Indian J Gastroenterol* 2000; 19:36-7.

7. Nozoe T, Funahashi S, Kipamura M, Ishikawa H, Suehiro T, Iso Y, et al. Ileus with incarceration of spigelian hernia. *Hepatogastroenterology* 1999; 46:1010-2.

8. Gedebou TM, Neubauer W. Laparoscopic repair of bilateral spigelian and inguinal hernias. *Surg End* 1998; 12:1424-5.

9. Moreno-Egea, Flores B, Girela E, Martin JG, Aguayo JL, Canteras M. Spigelian hernia: bibliographical study and presentation of a series of 28 patients. *Hernia* 2002; 6:167-70.