

Spigelian Hernias, A Diagnostic Enigma - A Case Report

Dr. R K Shastri¹, Dr Neelagiri Nalin Krishna², Dr Manoj Kumar Sistu³

¹R.K. Shastri M.S., General Surgery, Professor of Surgery, Dr Pinnamaneni Siddhartha Institute of Medical Sciences And Research Foundation, Chinaoutpalli, Krishna District, Andhra Pradesh, India.

²Neelagiri
Nalin Krishna,

³Manoj Kumar Sistu, Post Graduate Student Of General Surgery, Dr Pinnamaneni Siddhartha Institute of Medical Sciences And Research Foundation, Chinaoutpalli, Krishna District, Andhra Pradesh, India

Abstract: Spigelian hernias occur in the lower abdomen where the posterior sheath is deficient. It protrudes through a slit like defect in the anterior abdominal wall adjacent to the semilunar line. The hernia ring is formed as a well-defined defect in the transversus abdominis. Extraperitoneal fatty tissue surrounds the hernial sac and it passes through the transversus and the internal oblique aponeuroses. Then spreads out beneath the intact aponeurosis of the external oblique. Spigelian hernia is a rare entity and constitutes 0.12% of abdominal wall hernias. Due to its interparietal position, it is difficult to diagnose it clinically.

It commonly does not cause a noticeable bulge in the abdominal wall. But in the present case a swelling was visible and the hernial content was palpable but no hernial orifice could be felt.

Keywords: Spigelian hernia, Semilunar line, Spigelian fascia, Preperitoneal space, Total extraperitoneal approach, Transperitoneal approach

I. Case Report:

A 68 year old male reported to us with a history of pain and a swelling in the left lower abdomen for 2 months. He gave a history of constipation and regular straining to have bowel movements.



Fig. 1

On examination he was of a bulky built. A swelling was noticed in the left side of his abdomen at the level of the arcuate line. A soft to firm lump of about 7 X 5 X 3 cm was palpable in the left lower abdomen but there was no palpable hernial orifice. In recumbent posture the lump was decreasing in size and impulse was visible on coughing. Tone of abdominal muscles was good. Clinically a diagnosis of left sided Spigelian hernia was made. Sonographic imaging confirmed the diagnosis. The hernial orifice in the Spigelian fascia, at the level of the mass was 3X3 cms. Patient was posted for an open hernioplasty.



Fig. 2



Fig. 3

Under epidural anesthesia, a horizontal incision was made over the swelling and the subcutaneous tissue was dissected down to the external oblique aponeurosis. The external oblique was incised in the direction of its fibers and the peritoneal sac was isolated by circumferential dissection.



Fig. 4



Fig. 5

The peritoneal cavity was entered after dividing the hernia ring. An adhesiolysis was done to free the sigmoid colon and omentum, which were the contents. Redundant peritoneum and fascia transversalis was trimmed and sutured after reducing the contents. The peritoneum was repaired. A polypropylene onlay mesh was put in the preperitoneal space overlapping the defect by 2-3 cm, and fixed with loose sutures. The gap in the transverse abdominis and internal oblique was approximated. Then aponeurosis of the external oblique was closed by continuous suture, and the subcutaneous tissue and skin were closed with staples. The postoperative course was uneventful. Patient was advised to avoid strenuous activity during recovery and to come for a follow up after 3 months.

II. Discussion

Spigelian hernia commonly occurs in patients over 50 years. It tends to be small and develop in the abdominal wall. Patients may not experience a visible bulge or evidence of swelling unless they possess minimal fat in the abdominal area. But in this case bulge was clearly visible. A CT was not advocated as ultrasound gave a clear cut diagnosis.

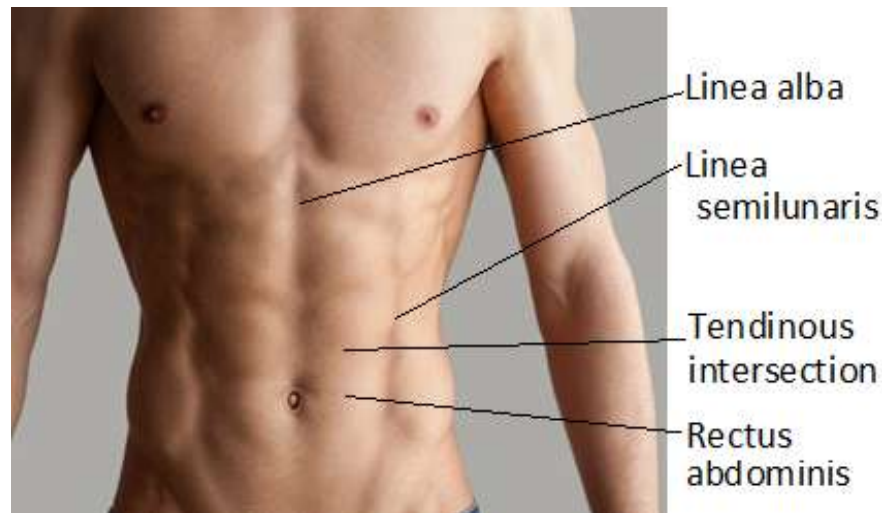


Fig. 5

The linea semilunaris or Spigelian line is a curved tendinous intersection visible on lateral border of the rectus abdominis muscle, is formed by the aponeurosis of the internal oblique. The aponeurotic layer between the rectus abdominis medially and the semilunar line laterally is the Spigelian fascia. A hernia through this fascia is called a Spigelian hernia, or spontaneous lateral ventral hernia. These are very rarely seen hernias and constitute only 0.12% of all abdominal wall hernias.[1] Usually the sac content is omentum but small gut, appendix, sigmoid colon, gall bladder, stomach or ovary also have been reported.

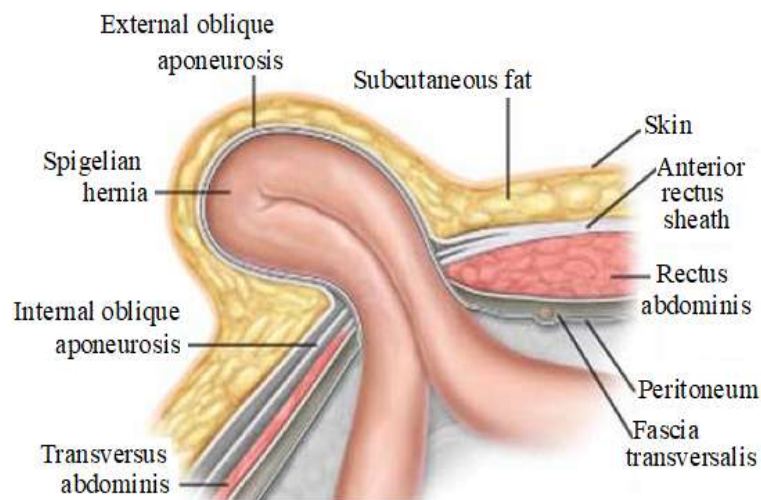


Fig. 6

It can be congenital or acquired.[2] The weak spot in spigelian fascia created by perforating vessels may gradually lead to hernia formation. Other risk factors being obesity, multiparity, lifting heavy objects, excessive fluid in the abdomen, abdominal trauma, previous abdominal surgery, as a complication of continuous ambulatory peritoneal dialysis (CAPD).[3] The hernia can rarely enter the rectus sheath through linea semicircularis, and gives an impression of a hematoma in the rectus sheath. They are usually small with a high risk of strangulation [4,5], due

to sharp fascial margin around the defect. A Richter type of hernia can occur if part of the bowel wall becomes trapped. It requires immediate evaluation and emergency surgical intervention. If the defect is < 2cm there is ample chances of developing intestinal obstruction. 20% of these patients can present with strangulation. It is rare, in comparison to other ventral hernias. Fortunately, surgery is straight forward and an inversion of sac alone is enough. Only larger defects require a mesh prosthesis in pre-peritoneal space or above the fascia. Laparoscopic approach to small uncomplicated Spigelian hernias combines the benefits of laparoscopic localization, reduction, and closure without the morbidity and cost associated with mesh.[6] Laparoscopic hernia repair, with either TAPP or TEP approach is recommended when the patient is not having obstruction [7,8,9]. A mesh is fixed with either tackers or manual suturing. The prognosis is excellent. Peri-operative care is same as given to the patient as to any other hernia patient There is significant advantages for laparoscopy in terms of morbidity and hospital stay . The total extraperitoneal laparoscopic technique offers best results in the elective treatment settings of spigelian hernia [10]

III. Conclusion

Spigelian hernia, also known as **lateral ventral hernia**, is very rare, with only 1000 cases reported in literature.[10] Usually presents as a mass appearing intermittently with localized pain or features of intestinal obstruction. Some cases present as only abdominal pain with no lump. It is extremely hard to diagnose the condition and it frequently remains unidentified as located inside the muscles of the wall of the abdomen. They need imagological investigations to arrive at a correct diagnosis. An abdominal sonography is recommended first. A CT or a contrast enhanced CT reveals the diagnosis in doubtful cases. MRI is quite useful in difficult cases for a preoperative evaluation. If diagnosed, operation should always be advised.[11]

It can be repaired by both conventional or laparoscopic approach. Usually an inlay mesh is put to cover large defects of 4 cm or more in diameter. Can be managed by transperitoneal approach either by placing the mesh in intraperitoneal position (onlay IPOM repair) or by raising the peritoneal flap and placing the mesh in preperitoneal space (TAPP) or a total extraperitoneal repair (TEP). There is significant advantages of laparoscopy in terms of morbidity and hospital stay . The total extraperitoneal laparoscopic technique offers best results in the elective treatment settings of spigelian hernia [12]

References

- [1]. Howlihan TJ. A review of Spigelian hernia. *Am J Surg.* 1976; 131:734–5. [PubMed]
- [2]. Weiss J, Lerman OZ, Nilson S. Spigelian hernia. *Ann Surg.* 1974;180:836–9. [PMC free article] [PubMed]
- [3]. Engeset J, Youngson GG. Ambulatory peritoneal dialysis and hernia complications. *Surg Clin North Am.* 1984;64:385–92. [PubMed]
- [4]. Raveenthiran V (Dec 2005). "Congenital Spigelian hernia with cryptorchidism: probably a new syndrome". *Hernia.* **9** (4): 378–80. PMID 15782280. doi:10.1007/s10029-005-0316-z
- [5]. Vos DI, Scheltinga MR (2004). "Incidence and outcome of surgical repair of spigelian hernia". *The British journal of surgery.* **91** (5): 640–4. PMID 15122618. doi:10.1002/bjs.4524
- [6]. Bittner JG, Edwards MA, Shah MB, MacFadyen BV, Mellinger JD (August 2008). "Mesh-free laparoscopic spigelian hernia repair". *Am Surg.* **74** (8): 713–20; discussion 720. PMID 18705572
- [7]. Moreno-Egea A, Carrasco L, Girela E, Martin JG, Aguayo JL, Canteras M. Open vs. laparoscopic repair of spigelian hernia: A prospective randomized trial. *Arch Surg* 2002;137:1266-8
- [8]. Tarnoff M, Rosen M, Brody F. Planned totally extraperitoneal laparoscopic Spigelian hernia repair. *Surg Endosc* 2002;16:35
- [9]. Moreno-Egea A, Aguayo JL, Girela E. Treatment of spigelian hernia using totally extraperitoneal laparoscopy ambulatory surgery. *Surg Endosc* 2002;16:1806.
- [10]. D Belekar, A Desai, A Dewoolkar, V Dewoolkar. *Spigelian Hernia: A Case Review.* The Internet Journal of Surgery. 2008 Vol. 21 Number 2.
- [11]. T Mittal, V Kumar et al, Diagnosis and management of Spigelian hernia: A review of literature and our experience, *J Minim Access Surg.* 2008 Oct-Dec; 4(4): 95–98.
- [12]. Alfredo Moreno-Egea, ; Luis Carrasco, et al Open vs Laparoscopic Repair of Spigelian Hernia, A Prospective Randomized Trial *Arch Surg.* 2002;137(11):1266-1268. doi:10.1001/archsurg.137.11.1266

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