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Spigelian Hernia: A Rare Case Report

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I. Introduction

Spigelian hernia is a rare abdominal hernia, occurring through the spigelian aponeurosis, Named after Adriaen Van den Spigehel, an anatomist from Belgium who described the fascial defects associated with this rare herniaMost of the Spigelian hernia occurs in the lower abdomen where posterior sheath is deficient. The hernia ring is well defined defect in the transverse aponeurosis. Good clinical examination can detect this entity. The hernia may be intra-parietal with no obvious mass on inspection or palpation. The Spigelian hernia have been repaired by both conventional and laparoscopic approaches. it carries a significant risk of incarceration and strangulation As their clinical presentation is often vague pain in abdomen with or without a mass or with a very small lump, radiological diagnostic tests including ultrasonography (USG), Computerized tomography scan, are not 100% sensitive leading to a delayed diagnosis. Further because of its rarity no large series are available comparing different treatment modalities including primary repair Vs mesh repair, or to consider a laparoscopic repair.

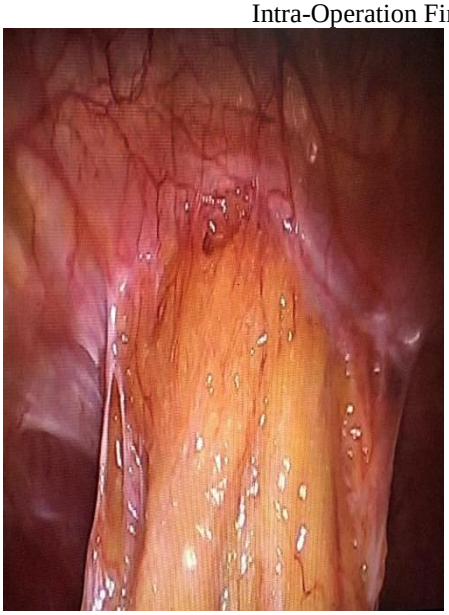
II. Case Report

We present a case of spigelian hernia in an elderly female patient and its management and discuss about the various investigations and the treatment modalities available for its repair, with literature review. A 52-year female patient from Afghanistan with no past comorbidities presentedwith complaints of swelling in right lower quadrant of abdomen since 11 months, she had noticed the swelling appearing on & off in her right lower abdomen on several occasions since 11 months which was brought on during manual work or excessive coughing and was not associatedwith pain and while resting in supine postureresults in disappearance of the swelling.

On per abdomen examination – A Non tender swelling of size 10x8 cms, Mobile in all direction, reducible, there was a doughy feeling on palpation of swelling. On making patient stand the swelling become more prominent and cough impulse was present, a provisional diagnosis of Spigelian hernia was made and the patient was subjected to USG, the findings of which were suggestive of a Spigelian hernia.

Surgery

Intra-Operation Findings & Repair -

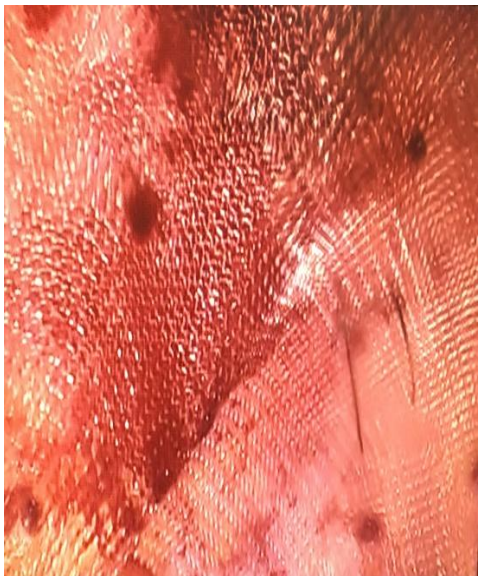


1-Hernial wall contents

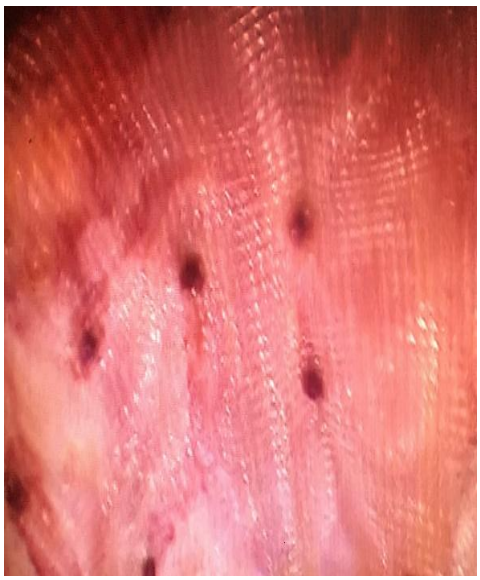
2-Dissection of contents

3-Dissection of contents

4-Hernial defect



4-Mesh repair with Tacks



5-Mesh repair with Tacks

Patient was taken up for Laparoscopic intraperitoneal mesh repair, was performed on elective admission after written informed consent was obtained. We used the intraperitoneal mesh repair technique. With the patient under general anesthesia, a 1.5-cm incision was made in the Palmer's point, and a 10-mm port was inserted. Carbon dioxide pneumoperitoneum was established. After we inserted a laparoscope, we confirmed that the omentum had herniated through the hernial orifice. Two 5-mm ports were placed on the patient's left side at the lateral edge of the left rectus abdominis and the second one in the epigastrium in the midline to achieve effective triangulation.

The omental adhesions at the hernia sac were taken down with sharp dissection using ultrasonic curved shears (Harmonic scalpel) and blunt adhesiolysis. We confirmed the position of the hernial orifice and the diagnosis of a Spigelian hernia. After the hernia had been completely reduced, the hernial orifice was measured and a suitably sized mesh of 15cm X 15 cm was chosen, which was rolled and inserted through the 10-mm port. The mesh covered the hernial orifice intraperitoneally and was tacked to the abdominal wall with a permanent fixation system. The laparoscopic procedure time was 40 min, and no intraoperative complications occurred. Post –op period was uneventful and patient was discharged on third post-op day. Patientwas completelyasymptomatic, without any complications or recurrence.

III. Discussion

Spigelian hernia is a hernia occurring through the Spigelian aponeurosis; Spigelian aponeurosis is the aponeurosis of rectus abdominis muscle limited laterally by semilunar line and medially by lateral edge of rectus muscle. Most of the Spigelian hernias occur in an area 6cms above the ASIS, weakest area in the aponeurosis is at the level of semicircular line (arcuate line of Douglas), due to splitting of the fascias of oblique and transversus muscle to form two separate layers. Hernias which occur below the inferior epigastric vessels are called low Spigelianhernias.In a large study done by Larsen dw and Farley mean age was63 years (3 days to 94 years), while in that conducted by Moles and Docobo mean age was 60.3 (17-92), proving it to be either congenital or acquired and most series noted that Spigelian hernia were more common on the left side with few instances of bilateral hernias. In the Spanish review most predisposing causes were previous surgery, obesity, chronic bronchopathy, multiparity and constipation. In most series difficulty was noticed in the diagnosis of the hernia.

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. 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 hernia sac content is reduced at the time of examination or when a small intraparietal hernia cannot be detected on palpation. In a study conducted by Vas and Schellinger interval between onset of symptoms and diagnosis varied from 2 days to 6 years. Diagnosis on basis of history and clinical examination fails in most cases especially in small hernias, or sacs progressing in a caudolateral direction taking it outside Spigelian zone, another contributing feature for difficulty is in most cases the overlying external oblique is not breached. Extreme difficulty is noted when hernia is small and not palpable especially in obese patients. So if a patient presented with pain at Spigelian hernia site, with point tenderness, with or without lump clinician should have a high index of suspicion for a Spigelian hernia and subject the patient to USG or CT-SCAN. Ultrasonic scanning of the semilunar line should be undertaken in all patients with obscure abdominal pain associated with bulging of the belly wall in the standing patient. The advantages of real time ultrasonography is the ability to perform examination in both supine and upright positions and while patient performs a Valsalva maneuver. Ultrasonic scanning being rapid, accurate, non-invasive and easy to perform is now a valuable diagnostic tool in both palpable and non-palpable Spigelian hernias. CT-SCAN is better than USG in doubtful cases. In our case as USG revealed a Spigelian hernia hence CT-SCAN was not ordered.

A Spigelian hernia may be confused with a lipoma or a parietal abscess. Spigelian hernia should be treated by surgical repair because of the risk of strangulation. Surgery can be performed either by open technique or by laparoscopically. Once diagnosis of Spigelian hernia is made it is better to repair it as early as possible as there is a risk of incarceration or strangulation needing emergency surgery.pangen recommended simple closure of the defect in the form of herniorraphy. Nozoe et al. 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. Tension free fascia lata graft or mesh repair is also employed for the repair of Spigelian hernias.The advent of laparoscopy has made these conventional approaches old-fashioned in experienced hands. Carter and Mizes performed first intra-abdominal laparoscopic repair of Spigelian hernia in 1992, they used sutures to close the defect. After that there have been multiple reports of successful management of Spigelian hernia by laparoscopy. Moreno Egea et al in a randomized clinical trial demonstrated advantage of laparoscopic repair over open repair in terms of morbidity and hospital stay.

IV. Conclusion

Spigelian hernias are rare disorder that results from acquired or congenital factors results in defect in the transversus abdominis muscle in anterior abdominal wall and subsequent protrusion of visceral content through the hernia defect. Spigelian hernias carry a significant risk of incarceration and strangulation of sac content. Clinical presentation is often vague, leading to delayed diagnosis. A thorough physical examination along with high clinical suspicion remains crucial in the diagnosis of the Spigelian hernia additionallyradiographic studies may facilitate the diagnosis of such hernias, The management of Spigelian hernias is almost always surgical, with a low recurrence rate after surgical repair. These can be repaired successfully by laparoscopic method (intraperitoneal or extra peritoneal approach) to confer all advantages of laparoscopy to patients. This case illustrates the role of laparoscopicintraperitoneal approachin the treatment of Spigelian hernia, Early prompt surgical intervention prevents catastrophic complications of incarcerated Spigelian hernias.

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