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Original Research Paper

General Surgery

SPIGELIAN HERNIA VARIOUS PRESENTATION AND MANAGEMENT- A CASE SERIES

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ABSTRACT

BACKGROUND: Spigelian hernia is rare and requires high index of suspicion. Given the case of inconsistent findings and signs the diagnosis of spigelian hernia presents with great difficulties than its treatment. Incidence of spigelian hernia ranges from 0.1% to 2% of all abdominal hernias

AIM: Aim of this case series is to analyze epidemiological aspects, clinical presentation, challenges in diagnosis, surgical technique characteristics, morbidities and hospital stay

MATERIALS AND METHODS: A total number of 4 patients who had undergone surgery for spigelian hernia for a period of 6 months from the month of Jan to June 2021 in the dept of general surgery in KMCH were studied. All 4 cases have been analyzed in this study period and followed up until discharge from the hospital.

RESULTS: This case series consisted of 4 cases. All cases presented with pain. Only 2 among 4 cases presented with swelling. Definitive diagnosis of all cases could be done only by CT. Out of these 1 was taken up as emergency.Intraoperatively 3 cases were interstitial and 1 was subcutaneous type. All 4 cases were treated by open surgical technique and by placing mesh at different planes

CONCLUSION: Diagnosis of spigelian hernia presents with great difficulties and hence one must be aware of the clinical presentation. Pain is the consistent feature of all hernias and only occasionally swelling is present which may mislead easily. Computed tomography of abdomen and pelvis still prevails as the definitive radiological investigation in the diagnosis of spigelian hernia. There are many planes at which mesh can be placed for repair where the operative techniques vary. Though the outcome was good in all four cases discussed here, the post operative complication and duration of stay was considerably less when the mesh was placed in the intermuscular plane.

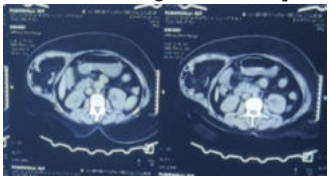
KEYWORDS :

	CASE 1	CASE 2	CASE 3	CASE 4
Age/Gender	52/F	55/F	50/F	57/M
Risk factors	-	-	Lifting heavy weights	Smoking
Duration of symptoms	1 year	6 months ↑(2 days)	5 days	1 week
Co-morbidities	Diabetic	-	-	-
Clinical presentation	Pain, Vomiting, Swelling	Pain	Pain, swelling	Pain
Examination	Swelling+ Cough impulse+	No swelling Tenderness + In RT Iliac fossa	Swelling+ LT Iliac fossa	No Swelling Tenderness + in RT Iliac fossa
Diagnosis done by	USG CT scan	CT scan	USG CT scan	CT scan
Elective/ Emergency	Elective	Emergency	Elective	Elective
Type of Spigelian	Interstitial	Subcutaneous	Interstitial	Interstitial
Plane of mesh	Preperitoneal and Overlay	Overlay, Anatomical closure of defects in muscles	Intermuscular	Intermuscular
Suction drain	+	+	-	-
Duration of stay	10 days	12 days	4 days	5 days
Post op period	No wound seroma	Seroma+	No wound seroma	No wound seroma

Case Report-1

A 52 year old lady presented with right sided abdominal pain and frequent vomiting for a duration of 1 year. She gave no history of altered bowel habits. Patient is a known diabetic and on regular treatment. Patient has not undergone any abdominal surgeries in the past. Physical examination revealed swelling below and right to the umbilicus with the presence of cough impulse. X-Ray abdomen was normal. USG Abdomen showed defect in the abdominal wall with herniation of bowel and omentum. Ct scan of abdomen revealed Spigelian hernia with herniation of omentum, distal ileal loops and their mesentry.

Patient was operated electively, intraoperatively Spigelian hernia with omentum and bowel as content was noted. Preperitoneal mesh placement followed by Anatomical closure of the defect using 1-0 prolene and overlay placement of mesh was done (dual mesh repair) . Suction drain kept. Post operative period uneventful and patient discharged on POD-9. Patient is on regular follow up.

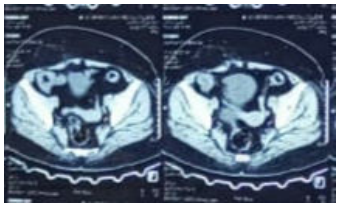


Case Report-2

A 55 year old female complaints of pain over abdomen below and to the right of umbilicus for the duration of 6 months

increased for the past 2 days associated with vomiting and tachycardia. Examination revealed swelling and tenderness present below and right to umbilicus. USG Abdomen revealed no significant abnormality. Ct scan of abdomen revealed Spigelian hernia with herniation of omentum.

Patient taken up for surgery immediately and there was subcutaneous herniation of the sac through spigelian fascia. On opening sac there was incarceration of the omentum, hence omentectomy performed followed by anatomical repair of different layers of the muscle and overlay mesh repair suction drain kept post operatively, patient developed seroma from wound site but got decreased during the course of 12 days of hospital stay. Patient is on regular follow up.



Case Report- 3

A 50 years old lady presented with sudden onset left sided lower abdominal swelling and pain of 5 days duration, following lifting of a filled water can. She gave no history of altered bowel habits. She had no known comorbidities and had not undergone any abdominal surgeries in the past. Physical examination revealed a swelling below and to the left of the umbilicus. She was advised admission. Ultrasonography (USG) showed 3cm defect in left part of hypogastrium with herniation of viable bowel & omentum. Her abdominal X ray was normal with no air fluid levels. Other routine lab values were normal. Computed tomography (CT) showed herniation infra umbilically over left side.

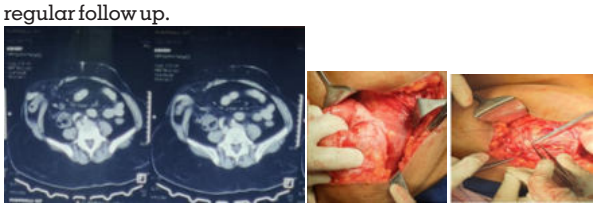
Patient was operated electively. Intraoperatively, spigelian hernia with omentum and bowel as content was noted. Anatomical closure of the defect of size about 4cm was done using 1-0 prolene followed by mesh repair and above it external oblique aponeurosis closed. Post operative period was uneventful and patient was discharged on Pod-3. Patient is on regular follow up.

Case Report-4

A 57 Male patient, smoker, complaints of pain and swelling over right abdomen below umbilicus for a duration of 1 week. Physical examination revealed tenderness below and right to the umbilicus with no evidence of swelling.

USG Abdomen showed 2cm defect in the right part of hypogastrium with herniation of omentum. Abdomen X-ray was normal with no dilated bowel loops. CT scan of abdomen revealed Spigelian hernia with herniation of omentum.

Patient was taken up for surgery electively and transverse incision was made and sac with contents found below external oblique aponeurosis which was reduced and mesh repair was done after anatomical closure of defect external oblique aponeurosis closed above the mesh. Post operative period uneventful. Patients discharged on POD-5. Patient is on regular follow up.



CONCLUSION:

Diagnosis of spigelian hernia presents with great difficulties and hence one must be aware of the clinical presentation. Pain is the consistent feature of all hernias and only occasionally swelling is present which may mislead easily. Computed tomography of abdomen and pelvis still prevails as the definitive radiological investigation in the diagnosis of spigelian hernia. There are many planes at which mesh can be placed for repair where the operative techniques vary. Though the outcome was good in all four cases discussed here, the post operative complication and duration of stay was considerably less when the mesh was placed in the intermuscular plane.

DISCUSSION:

Adriaan van der Spiegel, a Belgian anatomist, First described the semilunar line as a concave region at the lateral border of the rectus muscle formed by the inferior oblique aponeurosis. More than 100 years later, in 1764, Klinkosh identified the "hernia of the spigelian line" as a distinct entity. Usually occurs around 4th to 7th decades with male to female ratio of 1:1.18. Spigelian line 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 will prevent herniation and therefore its incidence above the umbilicus is negligible . Herniation usually occurs in that area of the Spigelian fascia, which is weakened by perforating vessels. 85-90% of the hernias occur within this "Spigelian hernia" belt. Diagnosing spigelian hernia is a challenge since it has no characteristic symptoms, and may be interparietal with no obvious mass on inspection or palpation. Less than 50% of cases are diagnosed preoperatively. 20% to 30% require emergency intervention due to narrow neck of these hernias. Surgical management includes transverse incision and primary repair. Primary repairs have been associated with a low, but real recurrence rate of about 4%. As expected, mesh repairs have been successfully applied to treat spigelian hernias. Few or no recurrences at long-term follow-up have been reported by investigators. Carter and Mizes performed first intra-abdominal laparoscopic repair of Spigelian hernia in 1992 suture closing the defect. 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 approach. Since Spigelian hernias are elusive clinically and chances of strangulation are high, surgical management should be advised at the earliest.

REFERENCES

1. Carter JE, Mizes C. Laparoscopic diagnosis and repair of Spigelian hernia: report of case and technique. Am J Obstet Gynecol. 1992;167:77-8.
2. Klinkosch JT. Programma quo divisionem herniarum. In: Klinkosch JT, eds. Novumque Herniae Ventralis Specium Proponit. Rotterdam: Benam; 1764.
3. Howlihan TJ. A review of Spigelian hernia. Am J Surg. 1976;131:734-5.

4. Spagen L. Spigelian hernia. World J Surg. 1989;13:573-80.
5. Rogers FB, Camp PC. A strangulated Spigelian hernia mimicking diverticulitis. Hernia. 2001;5:51-2.
6. 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.
7. Montes IS, Deysine M. Spigelian and other uncommon hernia repairs. Surg Clin North Am. 2003;83:1235-1253.
8. Larson DW, Farley DR. Spigelian hernias: repair and outcome for 81 patients. World J Surg. 2002;26:1277-1281.
9. Patle NM, Tantia O, Sasmal PK, Khanna S, Sen B. Laparoscopic repair of spigelian hernia: our experience. J Laparoendosc Adv SurgTech A. 2010;20:129-133.
10. 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.
11. Slakey DR, Teplitsky S, Cheng SS. Incarcerated Spigelian hernia following laparoscopic living-donor nephrectomy. J Soc Laparoendosc Surg. 2002;6:217-9.
12. Kasiranjan K, Lopez J, Lopez R. Laparoscopic technique in the management of Spigelian hernia. J Laparosc Adv Surg Tech. 1997;7:385.