Int J Pharm Bio Sci 2013 Apr; 4(2): (B) 894 - 898

Case report **Allied Sciences**

International Journal of Pharma and Bio Sciences **ISSN 0975-6299**

SPIGELIAN HERNIA – A RARE HERNIA, A CASE IN A RARE SITE.

DR .PRAN GOPAL SARKAR.

Associate Professor , Dept. Of General Surgery, West Bengal Medical Education Service, India.

ABSTRACT

Background- Spigelian hernia occurs through defects in transversus abdominis aponeurosis due to various etiology. Site is usually below arcuate line of Douglus- but rarely cited at higher level.
Its incidence is 0.12 % of abdominal wall hernias. It is more rare to be detected at a higher locus above umbilicus. Although recently laparoscopic repair getting popularity, open repair still seems to be the commonest procedure done in this part of world.
Patient and Method—An obese patient with COPD presented with a reducible swelling at upper abdomen. Operatively it was a Spigelian hernia with big neck. Open pre-peritoneal mesh placement repair was done. patient recovered well.
Result:- Open repair with mesh is proved to be well suitable in our case of spigelian hernia in a very uncommon above umbilicus site
Conclusion:-Spigelian hernia at the uncommon supra umbilical site is sparingly reported. This is such a case, with other comorbid conditions. It responded well with the classical open repair

KEYWORD: Spigelian Hernia, supraumbilical, open repair with mesh.

DR PRAN GOPAL SARKAR.
Associate Professor , Dept. Of General Surgery,
West Bengal Medical Education Service, India.

Corresponding author

INTRODUCTION

Spigelian hernia is a protrusion of extra peritoneal fat, peritoneal sac with or without any viscera, through a weakness in the spigelian fascia (3). Henry Francis Le darn described about tear in semilunar line in 1742 . Joseph klinkosch (1764) was first to call the condition as hernia (3). Spigelian line is a curve line extruding from tip of 9th costal cartilage up to pubic tubercle , keeping lateral to rectus abdominis muscle. It denotes the line of transformation of transversus abdominis muscle fibre to apponeurotic fibers . It was first described by Adrian van der Spieghel (1578-1625),a surgeon-anatomist-botanist, who practiced medicine in Padua of Italy, in his treaties *De semilunoris libri quator* in 1624(4) The eponym spigelian hernia, thus, was derived from his name. Spigelian fascia is that portion of aponeurosis that extends between semilunar line and lateral border of rectus abdominis . In is widest in a 6 cm wide portion of abdominal wall above the line joining two anterior superior iliac spines, and it extendes above arcuate line of Douglas. Maximum spigelian hernia occurs through this zone (5) This area is known spigelian Belt or Zone. Spigelian fascia in its upper 2/3 rd is reinforced by prolongation of muscular fibres of trans. abdominis. It usually prevents herniation through this area. Even then, if it at all happens ,rarely , then it is called ' high spigelian hernia'. Our case is thus a high spigelian hernia, and it is rare. Spigelian hernia occurring below the interterspinous line , then comes out through Hesselbach"s triangle and there it is called "low spigelian hernia". It should be differentiated from direct inguinal hernia. Opinion varies about accepting post surgical incsional herniation through spigelian line , as true spigelian hernia (6)

Case Report

A 56 yr obese male patient with COPD reported with upper abdominal swelling for last one year. It expanded laterely gradually. Cough impulse was positive and it was reducible . Investigation – TC DC Hb% ESR, lipid profile, P-time, Ecg, usg – whole abdomen, Lung function test, BMI estimation, X-ray Chest done. Lung function showed fall of FEV1. Other reports were within normal limits Pre-operatively he was placed on nebulisation three times a day . Chest physiotherapy, broad spectrum antibiotic, bronchodilator was instituted to avoid per and post operative complication . Operation was done under epidural anaesthesia . A liberal transverse incison over the swelling was done. The sac was exposed and found to be lying between ext. oblique aponeurosis and int.oblique muscle fibers . The neck was large (4cm), situated midway between umbilicus and xiphisturnum. After all around dissection , sac was excised , containing omentum was reposited, and the neck was formally closed.(Fig 1)

Figure 01
Big size neck of hernia sac , coming out through spigelian fascia

A space was made out by dissection in extra peritoneal space , deep into the muscle fibers. A proline mesh (6"X6") , made to size, was placed in extra peritoneal space. (Fig 2) Muscle fibers were approximated over it with 2 -0 proline. The rest of the operated area closed in layers.

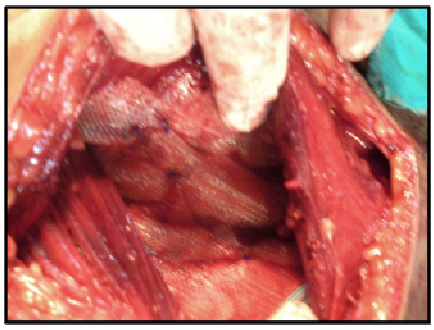

Figure 02
Pre peritoneal placement of Proline mesh

Pre-op respiratory care was continued post operatively. Oral feeding was withheld for two days, to avoid any illeus and was on IV fluid till then. He was nursed on propped up position as far as practicable A delayed complete stitch removal was done on 11th day. He was on abdominal corset for wound support. Discharged on 18th day , with an advice to have no physical strain for three months. His COPD and obesity was of concern to us, and though made ambulatory as soon as possible, release from the hospital was made to delay. There was no recurrence up to one year of follow up.

DISCUSSION

spigelian hernias is a relatively rare condition. Its incidence is 1-2% (7) among all hernias and only 0.1 – 0.2% of abdominal wall hernias (4), Male **:** female – 1**:**1.8**,** more common in 4th decade of life (2) Eombryologically, it is the clinical outcome of weak areas in contribution of aponeurosis of layered abdominal muscles as they develop separately in the mesenchyme of the somatopleara, originating from the invading fusifrom myotomes (2) At molecular level deletion of gene 7q1123 (8) leads to defective elastic fibre synthesis. Coexisting gene 2 defect leading to collagen synthesis disorder may augment the possibility of spigelian hernia , along with other co-existing genetic disorder syndromes, viz. Williams syndrome . An obvious parietal swelling with reducibility and cough impulse poses no problem is diagnosis (9). But the clinical diagnosis may be difficult because of a small obscure sac many a time remains hidden under the layers of parietal muscles – hence the name "Masked" hernia of Macready (4) In suspicious cases, suggestive clinical finding can be illicitated by alternately contracting and relaxing the abdominal muscles while examining in erect posture .In doubtful cases high resolution USG and CT with oral contrast, which is rapid, noninvasive and accurate, clinches the diagnosis It can be bilateral both in adults (10, 11, 12 , 13,) and neonates . Neonates sometimes may be associated with other type of hernia, cryptorchidism (14) and genetic disorder syndromes (8), 15. Large supra umbilical spigelian sac was noticed by Golderger (16) . Large lower spigelian hernia was reported by Jabulay (17) Lemeric, (18), Fournier (19). The other condition that mimic spigelian hernia are rectus sheath haematoma, parietal abscess, parietal lipoma , metastatic deposit, cystic changes around lower end of ventriculo peritoneal shunt (6) Surgery is the only option to treat. Till now open Surgery was the only meanse .Simple herniorrhaphy(9), approximating trns. abdominis and Intrn**.**obelique apponeurosis (20) was done previously. With the advent of mesh,

hernioplasty with onlay or extraperitoneal subfascial, deep to muscle mesh placement is a better option .(21) Laproscopic TAP or total extraperitoneal repair is comming up with good result (22),. We did open extra-peritonial mesh placement with satisfactory result (23).Our pt was not suitable for ETGA and CO2 induced pneumoperitonium due to his COPD. Genetic analysis was not possible in our institution

CONCLUSION

Spigelian hernia, a rarity, usually found at or below the Arcuate line of Douglas . But very rarely it is detected above umbilicus (16). Patients with undiagnosed recurrent pain abdomen should be searched for this condition to avoid a sudden possible strangulation (22).USG or CTscan with oral contrast is diagnostic in clinically doubtful cases. In children , cryptorchidism (14,15), and patients with collagen synthesis disorder (8) should also be looked for this hernia. With raised obesity every where, abdominal wall hernias are on the rise (6). Open repair is still very much effective

ACKNOWLEDGMENT

We are thankful to the patient to given us verbal permission for publication of the case. We are thankful to the Authority of Burdwan Medical College to allow us to publish the case report.

REFERENCES

1. Spangen L, Spigelian hernia, Surg Clinics of north America,1984: 341-66
2. Sandalaski P N et al , Spigelian hernia;Surgical anatomy,embryology and technique of repair Ann of Surgery 2006 Jan 72(i): 42-8
3. Bitner J G,et al, Mesh free laparoscopic spigelian hernia repair American J Surg 2008 74(8): 713-720
4. Dabbas N. et al, Frequency of abdominal wall hernias; is classical teaching out of date? J Royal Society of Medicine, Short Paper, 2011 Jan 19: 2(1):5
5. Louis P R, Spigelian hernia,spontaneous lateral ventral hernia through the semiluner line Annals of Surg: 1942
6. Rahman J M et al, A case of spigelian herniaat anunusually high anatomical location Royal college of surgeon Edinborough: 2000, 45 : 196-7
7. Karman Ahmed Malik, et al,Spigelian hernia, a rarity.J.Pak Medical Association Sept 2006
8. Farhan Rashid et al, Atypical right diaphragmatic hernia(hernia of morgagni),spigelian hernia and epigastric hernia in apatientwith Williams syndrome: case reportJ Medical Case Reports 2009; 3:7
9. Spangen L, Spigelian hernia World J Surg 1989 sept- oct 13(5) 573-80
10. Berger Spontaneous lateral hernia , quoted by Haollay in Am J surg, 75, 677 June 1922
11. Nystorm G, Two cases of hernia of Spigelli Act Chir Scand , 56, 92-95 1923 quoted by Louis P R (see reff. no 5)
12. Bartndtner , Case of traumatic hernia in the Spigelian line, Arch fur orthopedische und Unfall-chirujic 33,219. 1933 quoted by Louis P R(see reff, no 5)
13. Zenia A R et al, J Gastrointestinal Surgery 2012 Feb !6(2): 447-9
14. C. Rushfeldt et al, Spigelian cryptorhidism Syndrome a case report and discussionon the basic elements in a possibly new congenital syndrome, Pediatric surgery International 2010 Sept; 26(9): 939 -942
15. Raveenthrian V.et al,Congenital spigelian hernia with cryptoorchidism: probavly a

new syndrome , Hernia2005 vol 9, issue 4-378-380
16. Goldberger et al, Multiple hernia Am J surg 42, 423 Nov 1938
17. Jaboulay Rev de chirg 59,297 1921 quoted by Louis P R(see reff. No 5)
18. Lomeri Rev de chirg 59,297,1921 quoted by Louis P R(see reff no 5)
19. Fournier , Hernia of spigel line ,Bulletin et Gynac 22 ,695 oct 1933 quotrd byLouis PR(see reff. No.5)
20. Noze T et al,Ileus withincarceration of spigelian hernia, Hepatogastroenterology1999;46:1010-2
21. Conzo G et al, Giant spigelian hernia associated with Inguinal hernia,repair with polypropeline prosthesis Minarva clinics 2000 sept 55(9); 611-5
22. T. Mittal et al Diagnosis and management of spigelian hernia: A review literature and our experience J Minimal Acess Surg 2008 oct-dec.4(4):95-98
23. Moreno Egea et al, Spigelian hernia:bibliographical study and presentation of a series of 28 patients Hernia, 2002;6: 167-70