

## Case Report

# Laparoscopic transabdominal preperitoneal repair of concurrent spigelian and groin hernias: a rare case

Aditya C. Oak\*, Vishakha R. Kalikar, Ankur K. Patel, Roy V. Patankar

Digestive Disease Centre, Zen Hospital, Mumbai, Maharashtra, India

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**\*Correspondence:**

Dr. Aditya C Oak,

E-mail: dradityaoak@yahoo.com

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### ABSTRACT

Spigelian hernia is a rare type of abdominal wall hernia due to congenital defect in the transversus aponeurosis fascia. It has a prevalence of 2%. Traditionally, an anterior hernioplasty was used to repair these defects. Only a few cases have been reported in the literature. Here we discuss a case of a 66 year old female with chronic lower abdominal pain with swelling in left inguinal area diagnosed with spigelian hernia on ct scan along with left direct hernia as well as left femoral hernia found incidentally and repaired using totally extra peritoneal single mesh repair.

**Keywords:** TAPP, Spigelian hernia, Direct inguinal hernia, Femoral hernia, Preperitoneal repair, Laparoscopy

## INTRODUCTION

Spigelian hernia is a rare type of abdominal wall hernia. The Spigelian hernia is called after Adriaan van der Spiegel, a Belgian anatomist and surgeon, who discovered the linea semilunaris. It occurs due to a congenital defect in the transversus aponeurosis fascia. The Spigelian hernia occurs in the semilunar aponeurosis, the area between the semilunar line and the lateral edge of the rectus abdominalis muscle. It can also be called as lateral ventral hernia, semilunar line hernia, interstitial or conjoint tendon hernia. It has a prevalence of 0.1 to 2%.<sup>1,2</sup> It is more commonly seen in elder age group (40–70 year); especially in women.<sup>2,3</sup> They are very occasionally bilateral.

Clinical presentation of spigelian hernia is varied.<sup>4</sup> It is often difficult to give an accurate preoperative diagnosis because of the lack of specific signs. Most common symptom is that of pain localized in the region of the hernia with or without a palpable obvious swelling.<sup>4</sup> Femoral hernias are relatively rare. Of all the groin hernias that

occur in the general population, it comprises 2% to 8% of them and 30% in females.<sup>5</sup>

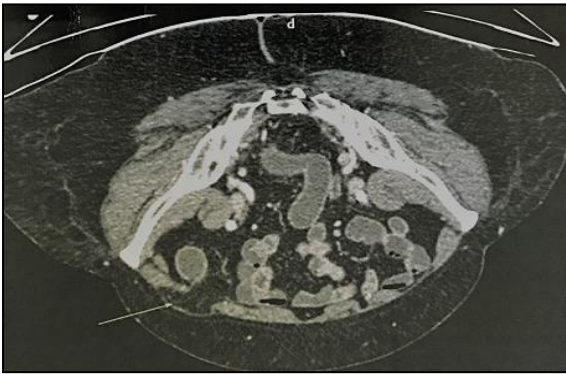
Synchronous hernias are rare and are very rarely reported. To our knowledge this is the second such case reported in literature having three synchronous hernias repaired by single pre peritoneal polypropylene mesh TAPP approach.<sup>6</sup>

## CASE REPORT

A 66 year old female came to the OPD with complaints of pain and swelling in the left groin region since one and a half years. It was spontaneously reducing on lying down and increased on long standing, coughing and on straining. The patient experienced pain when the swelling appeared. The patient also had a dull aching dragging pain in the left iliac region not associated with the swelling. However, the pain intensified when the swelling appeared.

The patient had history of previous vaginal hysterectomy done and no other surgical history. She also had no bowel bladder complaints. Due to the continuous dull aching

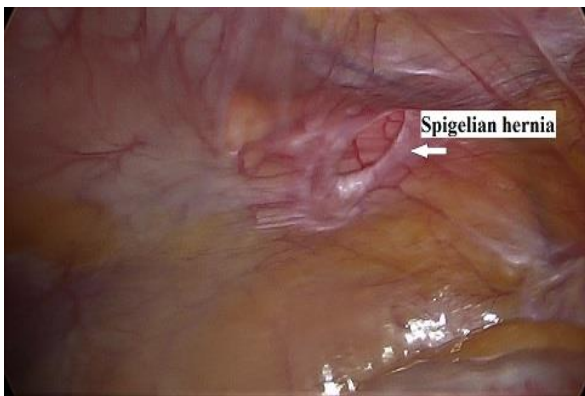
dragging type of pain a decision was taken to do a CT scan of the abdomen and pelvis.



**Figure 1: CT image showing left spigelian hernia.**



**Figure 2: CT image showing left inguinal hernia.**



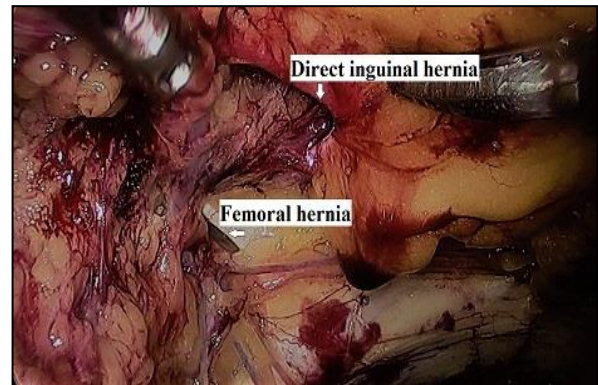
**Figure 3: Spigelian hernia.**

The CT scan was suggestive of a spigelian hernia in the left anterolateral aspect of anterior abdominal wall with herniation of omental fat along with a left direct inguinal hernia also containing omental fat. (Figure 1 and Figure 2)

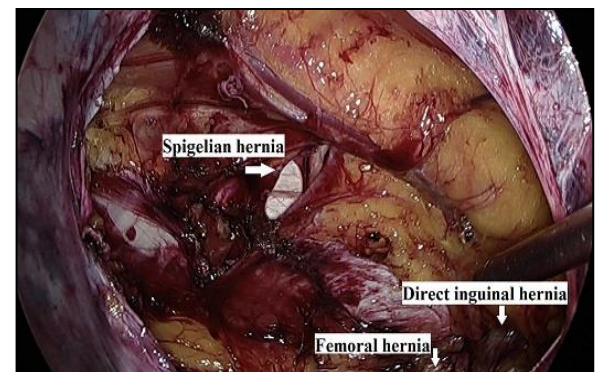
The patient was worked up for preoperative fitness and was taken up for surgery. A Laparoscopic Transabdominal preperitoneal polypropylene mesh repair was planned. On dissection in the preperitoneal plane two defects were found in the anterior abdominal wall corresponding to the spigelian hernia defect as well as the direct hernia defect.

(Figure 3 and Figure 4) A synchronous femoral defect was also discovered incidentally. (Figure 5)

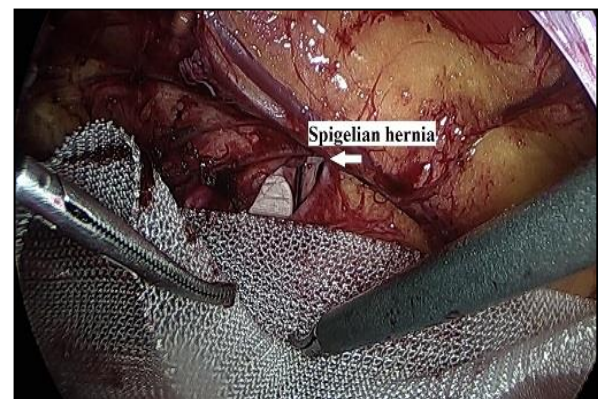
Post operatively the patient was started feeds after six hours and was ambulated on the same day and was discharged after two days. The patient was pain free under analgesic cover.



**Figure 4: Left direct inguinal with left femoral hernia.**



**Figure 5: All three hernias A 15 X 15 cm Polypropylene Bard mesh was used to cover all the three defects simultaneously and was fixed with tackers. (Figure 6) The peritoneum was sutured using vicryl 3-0.**



**Figure 6: Polypropylene mesh covering all three defects.**

## DISCUSSION

Spigelian hernias are difficult to diagnose due to its varied symptoms and clinical presentations.<sup>7</sup> However once diagnosed due to the high chances of strangulation or incarceration, it is necessary to operate spigelian hernias.<sup>8</sup> Spigelian hernias can be repaired using two surgical approaches, open and laparoscopic repair procedures, both using mesh-free primary aponeurotic closure or tension-free mesh repair methods, extraperitoneal on-lay repair with poly propylene mesh and transabdominal underlay repair with composite mesh. Laparoscopic procedure is less invasive and has been shown to have advantages over open procedures in reducing hospital days, postoperative pain, wound complications and recovery time.

Totally extra peritoneal repair for Spigelian hernia is the least documented technique because it is more difficult, takes longer and requires a more experienced surgeon.<sup>9</sup> Also visualization of synchronous hernias is difficult.

IPOM technique is the most commonly used procedure in the literature due to its better visibility of defects and shorter learning curve.

Transabdominal preperitoneal approach helps in identifying other potential hernias as well as reduces the cost of surgery due to the use of simple polypropylene mesh instead of using a composite mesh that is more expensive. Also it can be used to repair all three hernias including spigelian, inguinal as well as femoral hernias at the same time.

## CONCLUSION

Laparoscopic transabdominal preperitoneal repair in synchronous hernias is safer, easier, more feasible and cheaper alternative for experienced laparoscopic surgeons.

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