

*Prikaz bolesnika/
Case reports*

SPIGELIAN HERNIA – *Case report*

SPIGELIAN HERNIA – *Prikaz slučaja*

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Abstract

Spigelian Hernia occurs through defect in aponeurosis of internal oblique and transverse abdominal muscles (Spigelian fascia), along lateral border of rectus abdominis muscles, inferior/lateral to umbilicus. Occurs at the level or below arcuate line due to lack of posterior rectus sheath at this level. Defect size is small (usually < 2 cm in size) resulting in narrow hernia neck and high risk of strangulation. Most often contains portions of greater omentum, small bowel, or colon. May be congenital or acquired. Spigelian Hernia is rare and account for ~1% of ventral hernias. The incidence is thought to peak at around the 4th to 7th decades. The diagnosis of a Spigelian hernia at times presents is greater challenge than its treatment. Ultrasound can be recommended for verification of the diagnosis in both palpable and nonpalpable Spigelian hernia. The hernial orifice and sac can be well demonstrated by computed tomography, which gives more detailed information on the contents of the sac than does ultrasonic scanning.

Key words

Abdominal, Spigelian hernia, ultrasound,
CT scan

Ključne reči

Abdominalna, Spigelianova hernia,
ultrazvuk, kompjuterizovana tomografija.

INTRODUCTION

Diagnosis of abdominal wall hernia is often a clinical problem, especially in obese patients. Clinical diagnosis of a suspected hernia can be challenging owing to vague presenting symptoms and signs. A Spigelian hernia is a rare cause of acute abdominal pain and its diagnosis is often difficult to make.⁽¹⁾

Since the Spigelian hernia may occur anywhere along the Spigelian fascia, which lies along the semilunar line lateral to the rectus abdominis muscle, hernia although it is more common in the region where the semicircular line crosses the semilunar line. The external oblique aponeurosis covers the Spigelian fascia, which can make clinical assessment of a suspected hernia difficult.⁽²⁾

A number of radiological investigations have been used to diagnose Spigelian hernias. Ultrasonography like non-invasive and dynamic assessment of soft tissues despite limitations, is still an accurate evaluation of suspected Spigelian hernia. Multidetector CT is an accurate method of detecting various types of abdominal and diaphragmatic hernias. It clearly demonstrates the anatomical sites of hernial sac, its contents and possible complications.⁽³⁾

The treatment of Spigelian hernias is often surgical and the risk of recurrence is small.

This case illustrates the accuracy and importance in detecting the presence of Spigelian hernias. The aim of this

case report is to show the role of multidetector CT in preoperative imaging and planning of surgical treatment of Spigelian hernias.

CASE REPORT

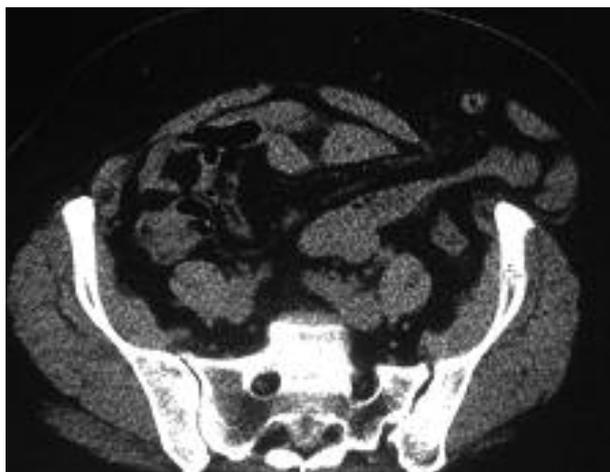
Patient 65-year-old female assessed by a consultant family medicine specialist in the outpatient clinic and presented to our facility with subacute onset of severe left iliac fossa pain. There had been a history of intermittent similar pain over the preceding 1 month, and she had been previously admitted to hospital with no cause found. Inflammatory markers and plain abdominal X-ray were unremarkable. Patient was found to be tender in the left iliac fossa with guarding and with bulging in lower left abdominal quadrant and pain over 3 weeks time, without any history of direct trauma. There were no significant co-morbidities other than obesity.

Radiologist ordered computed tomography (CT) scan of abdomen and pelvis without intravenous contrast, so called Hernia protocol, performed on Siemens SOMATOM Sensation 64 CT Scanner. Patient proceeded to surgery, which was used as the reference standard.

RESULTS

The CT scan demonstrated an ventral abdominal hernia - Spigelian hernia, along lateral border of rectus abdominis muscle on the left. Abdominal wall defect is up to 15 mm in

aponeurosis of transverse abdominal and internal oblique muscles on the left, lateral to rectus sheath, caudal to umbilicus, deep to external oblique muscle and fascia (Picture 1).



Picture 1



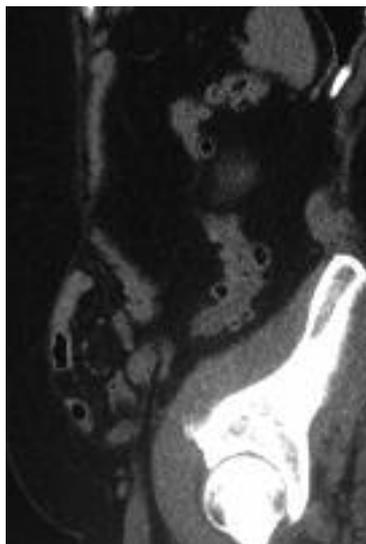
Picture 3

Non-incarcerated spigelian hernia contains part of omentum, ileum and abdominal fat tissue. No sign of incarceration (Picture 2 and 3). The patient underwent laparoscopic repair of her spigelian hernia the following week and made a fast and uneventful recovery.

DISCUSSION

Spigelian hernia occurs through defect in aponeurosis of internal oblique and transverse abdominal muscles (Spigelian fascia), along lateral border of rectus abdominis muscle. Occurs at the level or below arcuate line due to lack of posterior rectus sheath at this level.⁽⁴⁾ 90% within 6-cm transverse band above line joining anterior superior iliac spines (Spigelian belt).⁽⁵⁾ Defect size is small (usually < 2

cm in size) resulting in narrow hernia neck and high risk of strangulation.⁽⁶⁾ Most often contains portions of greater omentum, small bowel, or colon. May be congenital or acquired. Spigelian hernia is rare and account for ~1% (range 0.1-2%) of ventral hernias. The incidence is thought to peak at around the 4th to 7th decades.⁽⁷⁾



Picture 2

Patients may present with a palpable lump with the classical findings of a hernia. In this case, the diagnosis is relatively straightforward.

The hernia can be diagnosed by either CT or ultrasound scan, but these can be falsely negative, and unequivocal radiological diagnosis prior to surgery is rare. According to literature and in correlation with operative findings, computed tomography (CT) has a sensitivity of 100% and a positive predictive value (PPV) of 100%. Ultrasonography has a sensitivity of 90% and a PPV of 100%. Ultrasound can be recommended for verification of the diagnosis in both palpable and nonpalpable Spigelian hernia.⁽⁸⁻¹⁰⁾ But, hernial orifice and sac can be better demonstrated by computed tomography, which gives more detailed information on the contents of the sac than does ultrasonic scanning. However, CT is associated with a radiation exposure, which limits its role as a first line imaging modality for hernia. Spigelian hernias have shown a high rate of incarceration and concurrent risk of strangulation.⁽⁵⁾ It is strongly recommended that clinically occult Spigelian hernias should be assessed with radiological investigations before proceeding to surgery.

CONCLUSION

Diagnostics of Spigelian hernia at times often presents greater challenge than its treatment. In this setting, clinical assessment alone is not accurate in making a decision to operate.⁽⁹⁾ When no obvious Spigelian hernia is present, patients should be evaluated with radiological investigation to establish a diagnosis. Clinical assessment alone is inaccurate as a diagnostic tool for occult Spigelian hernias.⁽¹⁰⁾ The diagnostic potential of multidetector CT and ultrasonography in detecting clinically unrecognized cases of Spigelian hernia is significant and these imaging modalities can provide promptly and reliably diagnose.⁽⁴⁾

Sažetak

Spigelianova hernia (ili lateralna ventralna hernija) je vrlo redak tip abdominalne hernije. Nastaje kroz defekt u aponeurozi unutrašnjeg kosog i poprečnih trbušnih mišića (Spigelian fascia), duž lateralne granice rectus abdominis mišića, u nivou ili ispod lučne linije (linea semilunaris) usled nedostatka zadnjeg omotača fascije rectus abdominis mišića na ovom nivou. Veličina defekta je mala (obično <2 cm veličine) i rezultira u herniju uskog vrata sa visokim rizikom od strangulacije. Najčešće su male i prikrivene unutar trbušnog zida. Najzastupljenije su kod osoba oko 50-70 godina starosti, podjednako kod oba pola. Sadržaj kilne kese je najčešće od delova omentuma, tankog creva ili debelog creva. Može biti urođena ili stečena. Spigelianova hernija je retka i čini oko 1% ventralnih hernia. Spigelianova hernia se manifestuje lokalnim bolom i znacima opstrukcije usled inkarceracije. Bol se pojačava kontrakcijom trbušne muskulature. Dijagnoza predstavlja veći izazov nego sam tretman lečenja. Ultrazvuk se preporučuje za potvrdu dijagnoze. Sam defekt abdominalnog zida kao i evaluacija sadržaja kilne kese najbolje se mogu analizirati pomoću multidetektorske kompjuterizovane tomografije. Obzirom da su često reverzibilne i da se kilni kanal ne može spontano zatvoriti, kao i da postoji sklonost ka komplikacijama u vidu strangulacije i inkarceracije, preporučuje se elektivno hirurško lečenje.

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