



## Case Report

# Endometriosis in a Spigelian Hernia Sac: An Unexpected Finding

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Describes the existence of endometrioma in a spigelian hernia sac. Spigelian Hernia is a rare ventral hernia, presenting difficulties in diagnosis and carrying a high incarceration and obstruction risk. Endometriomas occur due to implantation of endometrial cells into a surgical wound, most often after a cesarean delivery. A 37-year-old woman presented to our department with persistent abdominal pain, exacerbating during menses, and vomiting for 2 days. Physical examination revealed a mass-like lesion in the border between the left-upper and left-lower quadrant. Ultrasound examination was inconclusive and a computed tomography scan of the abdomen revealed an abdominal wall mass. During surgery, a spigelian hernia was found 5 to 7 cm above a previous cesarean incision. Tissue like “chocolate cysts” was present at the hernia sac. Hernia was repaired while tissue was excised and sent for histological examination that confirmed the diagnosis. Spigelian hernia is a hernia presenting difficulties in diagnosis and treatment. Endometrioma in a spigelian hernia sac is a rare diagnosis, confirmed only histologically. Clinical suspicion can be posed only through symptoms and thorough investigation.

*Key words:* Spigelian hernia – Endometriosis – Cesarean section

Spigelian hernia (SH) is a rare ventral hernia occurring through semilunar line and carrying a high incarceration risk. Endometrioma is implantation of endometrial tissue. Authors present a rare case of symptomatic endometriomas discovered within a spigelian hernia sac.

### Case Presentation

A 37-year-old woman, 2 gravida, 2 para, presented to our department with persistent abdominal pain and vomiting for 2 days. She was afebrile and tachycardic (107 beats/min). Physical examination

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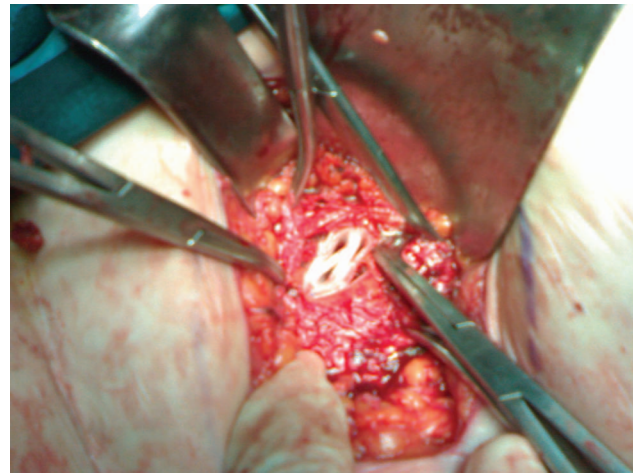


**Fig. 1** Endometrial tissue within spigelian hernia.

revealed a mass-like lesion in the border between the left-upper and left-lower quadrant. Blood tests showed leukocytosis (WBC count: 16.100/ $\mu$ L; neutrophil: 87%). From her medical history, she had 2 previous cesarean sections and 3 previous admissions to other hospitals due to this abdominal pain, which was treated conservatively. The ultrasound examination of the abdomen showed no abnormalities. Ultrasound of the abdominal wall was inconclusive due to patient's obesity. A computed tomography (CT)-scan of the abdomen revealed an abdominal wall mass. After more careful examination of the medical history, we found out that pain outbursts occurred during menses. A surgical intervention was decided. During surgery over a left-sided pararectal incision, a spigelian hernia was found 5 to 7 cm above the cesarean incision that contained tissue that macroscopically looked like "chocolate cysts" (Fig. 1). Ectopic tissue was excised and hernia was repaired. The ring of hernia was sealed with a polypropylene mesh/plug (Fig. 2). These findings pose the clinical suspicion of ectopic endometrial tissue. Histological examination confirmed this hypothesis. Postoperative course was uneventful. Patient is followed up until today presenting no signs of recurrence. Patient was followed-up for 2 years. In these years, no recurrence of hernia or endometriomas has been noted.

## Discussion

Spigelian hernia is a rare ventral hernia with a wide clinical spectrum and difficulties in preoperative diagnosis and a high incarceration and obstruction



**Fig. 2** Repaired hernia.

risk.<sup>1</sup> Spigelian hernias usually present at crossing point of semilunar (spigelian) and arcuate (Douglas) lines. Commonest symptoms are intermittent nonspecific pain and a bulging mass.<sup>2</sup> Once the diagnosis of SH is established, a surgical treatment is indicated because of the high complication risk.<sup>3</sup> Mesh correction of an acute hernia seems to be safe and should be considered in every incarcerated hernia, including acute presentations.<sup>3,4</sup> Image studies are recommended before surgical exploration. Increasing BMI and increasing age are associated with a higher prevalence and an increased risk of incarceration of Spigelian hernias.<sup>5</sup> A CT scan facilitates the diagnosis and is generally recommended before surgery.<sup>6</sup> Endometriosis is the presence of ectopic endometrial tissue. Extrapelvic endometriosis can form a discrete mass known as an abdominal wall endometrioma. Endometriomas are thought to be caused by transfer of endometrial cells into a surgical wound, most often after a cesarean delivery.<sup>2</sup> Endometrioma in a surgical scar is rare and appears in 0.1% of women who have undergone cesarean section; 25% of these women have concomitant pelvic endometriosis. It presents as a painful swelling on the scar with the patient's complaints resembling those of a postoperative hernia occurring in a scar. Abdominal wall endometriomas represent only 4% of endometriomas and can have the clinical presentation of an incarcerated hernia.<sup>7</sup> It can also mimic other lesions of the abdominal wall, such as hematomas, granulomas, abscesses, and tumors.<sup>8</sup> Endometriomas are diagnosed via ultrasound, computed tomography, magnetic resonance imaging, and ultrasound-guided fine needle aspiration. Surgical excision is the

treatment of choice. Cytological findings comprised epithelial clusters and fusiform stromal cells with numerous hemosiderin-laden macrophages.<sup>9</sup> Endometriosis in an inguinal<sup>10</sup> or an umbilical<sup>11</sup> hernia has been reported. Endometriosis in a spigelian hernia is rarely reported and neither before has there been presented a case analytically.<sup>12,13</sup>

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## References

1. Perrakis A, Velimezis G, Kapogiannatos G, Koronakis D, Perrakis E. Spigel hernia: a single center experience in a rare hernia entity. *Hernia* 2012;**16**(4):439–444
2. Nissotakis C, Zouros E, Revelos K, Sakorafas GH. Abdominal wall endometrioma: a case report and review of the literature. *AORN J* 2010;**91**(6):730–742
3. Nieuwenhuizen J, van Ramshorst GH, ten Brinke JG, de Wit T, van de Harst E, Hop W *et al.* The use of mesh in acute hernia: frequency and outcome in 99 cases. *Hernia* 2011;**15**(3):297–300
4. Wiedeman JE, Clay J. The open mesh repair of Spigelian hernia. *Am J Surg* 2008;**196**(3):460–461
5. Lau B, Kim H, Haigh PI, Tejjarian T. Obesity increases the odds of acquiring and incarcerating noninguinal abdominal wall hernias. *Am Surg* 2012;**78**(10):1118–1121
6. Martincal relevance. *Abdom Imaging* 2013;**38**(2):260–264
7. Simoglou C, Zarogoulidis P, Machairiotis N, Porpodis K, Simoglou L, Mitrakas A *et al.* Abdominal wall endometrioma mimicking an incarcerated hernia: a case report. *Int J Gen Med* 2012;**5**:569–571
8. Wolf Y, Haddad R, Werbin N, Skornick Y, Kaplan O. Endometriosis in abdominal scars: a diagnostic pitfall. *Am Surg* 1996;**62**(12):1042–1044.
9. Pathan SK, Kapila K, Haji BE, Malik MK, Al-Ansary T, George S *et al.* Cytomorphological spectrum in scar endometriosis: a study of eight cases. *Cytopathology* 2005;**16**(2):94–99
10. Kiyak G, Ergul E, Sarikaya SM, Yazgan A. Endometriosis of the groin hernia sac: report of a case and review of the literature. *Hernia* 2010;**14**(2):215–217
11. Yuen JS, Chow PK, Koong HN, Ho JM, Giriya R. Unusual sites (thorax and umbilical hernial sac) of endometriosis. *J R Coll Surg Edinb* 2001;**46**(5):313–315
12. Hunter TB, Freundlich IM, Zukoski CF. Preoperative radiographic diagnosis of a Spigelian hernia containing large and small bowel. *Gastrointest Radiol* 1977;**1**(4):379–381
13. Moles Morenilla L, Docobo Durántez F, Mena Robles J, de Quinta Frutos R. Spigelian hernia in Spain. An analysis of 162 cases. *Rev Esp Enferm Dig* 2005;**97**(5):338–347