

Left-sided Spigelian hernia with nontypical hernial sac content

Dominika Karkocha, Gustaw Lech, Mieczysław Jankowski, Maciej Słodkowski

Chair and Clinic of General, Gastroenterological and Oncological Surgery at the Medical University of Warsaw, Warsaw, Poland; Head: prof. Maciej Słodkowski MD PhD

Article history: Received: 21.05.2017 Accepted: 14.05.2019 Published: 15.06.2019

ABSTRACT: Spigelian hernia is one of the most uncommon hernia of the abdominal wall. Authors present 53 years old women with left sided spigelian hernia containing: caecum with appendix and ileum, which was an uncommon content of hernial sac. Past medical history of urinary bladder operation suggested postoperative hernia. However, the correct diagnosis was made during the operation. Hernioplasty was made with mesh onlay method. The postoperative course was unevenful.

KEYWORDS: appendix, hernia-operative treatment, Spigelian hernia

INTRODUCTION

Spigelian hernia, or lateral abdominal wall hernia constitutes approx. 1.2% of all hernias. It was first described by Josef Klinkosch in 1764. The name originated from the Flemish anatomy and surgery professor Adriaan van den Spieghel, who described the linea semilunaris or linea Spigelli in 1645 [1]. Linea semilunaris is the border between the anterior belly and the aponeuroses of the transverse abdominal muscle and extends from the VIII and IX costal cartilage to the pubic tubercle. It constitutes the lateral boundary of Spigelian fascia between the linea semilunaris and the lateral border of the rectus abdominal muscle. The protrusion of the hernia sac by an inherited or acquired defect in this fascia is called Spigelian hernia.

In 90% of cases, this hernia occurs in the so-called Spigelian band, that is from 0 to 6 cm in height from the line connecting the anterior superior iliac spines [2]. The fascia in this band is the widest and the weakest. The weakening factors of Spigelian fascia include: infiltration of its fibres by preperitoneal fat, parallel arrangement of the abdominal muscle fibres and the oblique abdominal below the navel, defects in the fascia in the passageways for blood vessels and nerves and weakening of the fibres at the junction with the arcuate line. Obesity, pluriparity, injuries, chronic lung diseases, constipation, ascites, rapid weight loss, and past abdominal surgeries predispose to a hernia [2, 3].

Spigelian hernia is most often intramural and spreads between the planes of the abdominal muscles [2]. Hernia gates are small, in most cases below 2 cm in diameter; usually with a stiff, clear edge. This is considered to be the reason for the high percentage of strangulations, 8–25% of hernias require urgent surgery [1, 2]. The content of the hernia sac is usually: the greater omentum or intestine. Contents such as the ovary, testis, gallbladder, stomach, Meckel's diverticulum, appendix, epiploic appendix and primary peritoneal tumour have also been reported [2, 4–6]. Most of the reports on Spigelian hernia are case reports or describe small groups of cases [7, 8, 9]. Cases of appendicitis in Spigelian hernia are rare in the world literature, in which case all available to the authors concern right-sided [10].

CASE REPORT

Patient A.M., 56 years old, was admitted to the Department of General, Gastroenterological and Oncological Surgery of the Medical

University of Warsaw due to periodically increasing pain in the lower abdomen and right iliac fossa and painful tumour on the left side. The patient's history included: 3 births, laparotomy due to post-traumatic bladder rupture from 16 years ago. Severe obesity was diagnosed (BMI = 33.6). A tumour appeared periodically in the left iliac fossa at the scar site after past bladder surgery, and it gradually increased. For two years, the tumour in the left lower abdomen has become non-reducible and the pain has been localised in the lower abdomen and right iliac fossa. USG confirmed the presence of inguinal hernia with the exclusion of inguinal hernia. Cholelithiasis was diagnosed, it was thought to be the cause of pain on the right side.

In physical examination, a tender tumour of approximately 14 x 10 cm extending down to the left groin was found in the left lower abdomen. The patient underwent surgical treatment with a preoperative diagnosis of postoperative hernia. The hernia sac was accessed under general anaesthesia through left pararectal incision of about 15 centimetres. After dissection of the sac, it was found that the hernia gates of 2 centimetres had no relation to the postoperative scar and were located laterally from the rectus sheath and medially from the linea semilunaris. The contents of the sac were constituted by loops of properly perfused small intestine and the fundus of cecum with the appendix. The intestine fused with the peritoneum was released. After the hernia gate was widened upward and appendectomy was performed, the content of the sac was discharged into the peritoneal cavity. The gates were closed with continuous seam, and the hernioplasty was reinforced with a PROLENE mesh sewn in with onlay method.

The postoperative course was uneventful. The patient was discharged home in good general condition on day 6 after surgery.

DISCUSSION

Lateral abdominal hernia occurs most often in women with obesity, at the age of about 50 years [1, 4]. The symptoms are varied and depend on the contents of the hernia sac. Typical symptoms include pain and palpable tumour. Abdominal pain can occur as the only symptom, especially in the early stages of the disease. In small hernias, the hernia gates may be difficult to determine, due to the adipose tissue or strong aponeurosis of the transverse

abdominal muscle. It is easy to diagnose a larger and reducible hernia, while it is more difficult in those which are small or strangulated. The usual localisation of the large hernia sac laterally and below the hernia gates is the reason for misdiagnosis [2] which occurred in this case. The fact that the appendix was localised in the hernia sac with caecum can explain pains in the right iliac fossa. Diagnosis was hampered due to the interview related to the past surgery. Diagnostic difficulties in recognising Spigelian hernia are emphasised in many publications, due to which the diagnosis is made intraoperatively (7–33%) [4, 11].

Ultrasound examination [2] is helpful in diagnostics. More detailed information on the contents of the sac is provided by computed tomography [12]. There are cases of false negative diagnoses [4]. Despite the performance of ultrasound examination, the patient was not diagnosed with a hernia. Due to the high risk of strangulation, the diagnosis of Spigelian hernia is an indication for sur-

gical treatment. Preoperative diagnosis gives the opportunity to choose the appropriate surgical method: laparoscopic retroperitoneal, intraperitoneal, classic with mesh onlay or without [14]. The results of surgical treatment are good. Only isolated cases of recurrent abdominal hernia [12, 4] have been reported in the literature, and they were more frequently associated with urgent surgery (10.7%) [1]. In complicated cases, a classical operation is recommended [14].

CONCLUSIONS

The rare prevalence, symptoms caused by the atypical content of the hernial sac, past surgeries and obesity undermine the preoperative diagnosis of Spigelian hernia. In such cases, diagnosis can only be made intraoperatively. Surgical treatment constitutes an efficient method of treating lateral abdominal hernia.

REFERENCES:

- Polistina F.A., Garbo G., Trevisan P. et al.: Twelve years of experience treating Spigelian hernia. *Surg.*, 2015; 157: 547–550.
- Spangen L.: Spigelian hernia. *Surg Clin N Am*, 1984; 64(2): 351–366.
- Read R.C.: Observations on the etiology of spigelian hernia. *Ann Surg.*, 1960; 152: 1004–1009.
- Larson D.W., Farley D.R.: Spigelian hernias: repair and outcome for 81 patients. *World J Surg.*, 2002; 26(10): 1277–1281.
- Allewaert S., De Man R., Bladt O. et al.: Spigelian hernia with unusual content. *Abdom Imaging*, 2005; 30(6): 677–678.
- Dixon E., Heine J.A.: Incarcerated Meckel's diverticulum in a Spigelian hernia. *Am J Surg*, 2000; 180(2): 126.
- Soszka A.E., Czarniecki W., Miller J.M.: Przepuklina linii półksiężycowatej Spiegela. *Pol Tyg Lek*, 1965; 20: 768–769.
- Słowiński W., Otworowski A.: Hernias of the semilunar line of Spiegel. *Pol Przegl Chir*, 1980; 52(1): 25–27.
- Kufel M., Chrościcki A., Terlecki P.: Przepuklina Spigla. *Pol Przegl Chir*. 2004; 76(2): 232–235.
- Reinke C., Resnick A.: Incarcerated appendix in a Spigelian hernia. *J Surg Case Rep*, 2010; 10: 3.
- Weiss Y., Lernau O.Z., Nissan S.: Spigelian hernia. *Ann Surg.*, 1974; 180(6): 836–839.
- Vos D.I., Scheltinga M.R.M.: Incidence and outcome of surgical repair of spigelian hernia. *Br J Surg.*, 2004; 91: 640–644.
- Carter J.E., Mizes C.: Laparoscopic diagnosis and repair of spigelian hernia: report of a case and technique. *Am J Obstet Gynecol*, 1992; 167(1): 77–78.
- Moreno-Egea A. i wsp.: Open vs laparoscopic repair of spigelian hernia: a prospective randomized trial. *Arch Surg.*, 2002; 137(11): 1266–1268.

Liczba słów: 1405

Liczba stron: 3

Tabele: –

Ryciny: –

Piśmiennictwo: 14

DOI: 10.5604/01.3001.0013.1995

Table of content: <https://ppch.pl/issue/12468>

Copyright: Copyright © 2019 Fundacja Polski Przegląd Chirurgiczny. Published by Index Copernicus Sp. z o. o. All rights reserved.

Competing interests: The authors declare that they have no competing interests.



The content of the journal „Polish Journal of Surgery” is circulated on the basis of the Open Access which means free and limitless access to scientific data.



This material is available under the Creative Commons – Attribution 4.0 GB. The full terms of this license are available on: <http://creativecommons.org/licenses/by-nc-sa/4.0/legalcode>

Corresponding author: Dominika Karkocha; Chair and Clinic of General, Gastroenterological and Oncological Surgery at the Medical University of Warsaw, Poland; Phone: +48 607037675; E-mail: dominika.karkocha@gmail.com

Cite this article as: Karkocha D., Lech G., Jankowski M., Słodkowski M.: Left-sided Spigelian hernia with nontypical hernial sac content; *Pol Przegl Chir* 2019; 91 (6): 47–49

