Ginekol Pol. 2014, 85, 699-702

PRACE KAZUISTYCZNE
ginekologia

Endometriosis causing intussusception of the ileum into the colon

Endometrioza jako przyczyna wgłobienia jelita krętego do okrężnicy

Piotr Walczak[1], Janusz Wiesław Kruszewski[1,2], Ewa Sobczak[1], Jarosław Szefel[1,2]

[1] Department of Surgical Oncology, Gdynia Oncology Center, Maritime Polish Red Cross Memorial Hospital, Gdynia, Poland
[2] Department of Propaedeutic Oncology, Faculty of Health Science, Medical University of Gdansk, Gdansk, Poland

Abstract

Intussusception of the caecum occurs about twenty times less frequently in adults as compared to children and in 90% of these cases is caused by intestinal tumors. Intussusception of the ileum usually causes intestinal obstruction which requires urgent surgical intervention. So far, only a few cases of intussusception due to the presence of endometrial tumor have been described. The clinical course, imaging and laboratory tests are not specific for endometriosis. The macroscopic appearance of the tumor during laparotomy is also not diagnostic. In case of endometriosis, the diagnosis can only be made on the basis of the histopathological examination of the excised tumor.

In this report, we present the diagnostic process and treatment of a patient with intussusception of the ileum to the ascending and transverse colon due to cecal tumor. During the operation, the surgeon suspected a cancerous tumor and performed a right hemicolectomy. The final diagnosis of endometriosis was made on the basis of the histopathological analysis.

Key words: **endometriosis** / **intussusception** / **gastrointestinal obstruction** /

Streszczenie

Wgłobienie kątnicy występuje blisko dwudziestokrotnie rzadziej u dorosłych niż u dzieci. W 90% przypadków główną jego przyczyną jest nowotwór jelita. Wgłobienie jelita krętego zazwyczaj powoduje niedrożność jelit, która wymaga pilnej interwencji chirurgicznej. Dotychczas opisano tylko kilka przypadków wgłobienia z powodu guza endometrialnego. Badania przebiegu klinicznego, obrazowe i laboratoryjne nie są specyficzne dla endometriozy. Makroskopowy wygląd guza w laparotomii nie jest diagnostyczny. W praktyce, w przypadku endometriozy rozpoznanie może być postawione tylko w oparciu o badanie histopatologiczne wyciętego guza.

W niniejszej pracy opisano diagnostykę i leczenie pacjentki z wgłobieniem jelita krętego do wstępnicy i poprzecznicy z powodu nowotworu jelita ślepego. Podczas operacji chirurg podejrzewając guz nowotworowy przeprowadził prawostronną hemikolektomię. Ostateczną diagnozę postawiono w oparciu o analizę histopatologiczną.

Słowa kluczowe: **endometrioza** / **wgłobienie** / **niedrożność przewodu pokarmowego** /

Corresponding author:
Piotr Walczak
Department of Surgical Oncology, Gdynia Oncology Center, Maritime Polish Red Cross Memorial Hospital, Gdynia, Poland
ul. Powstania Styczniowego 1, 81-519 Gdynia, Poland
tel.: +48-58 72 60 251, fax: +48-58 72 60 307
e-mail: ragast@o2.pl piotrwalczak83@wp.pl

Otrzymano: **09.01.2014**
Zaakceptowano do druku: **15.03.2014**

Introduction

Intussusception of the intestines in adults occurs sporadically as compared to children (5% and 95%, respectively). Adult intussusception is usually caused by benign and malignant tumors. Endometriosis is a rare cause of intussusception [1]. The frequency of endometriosis ranges from 3.8% to 37% [2, 3]. The basis for the development of endometriosis are uterine cells which migrate to the organs of the peritoneal cavity. The pathogenesis of the disease remains unclear [4]. Endometrial foci are most frequently localized in the organs of the lesser pelvis at the site of the uterosacral ligaments, the vicinity of the ovaries, the rectouterine, pouch and the uterovesical pouch [5, 6]. Endometrial invasion of solid organs is exceptionally rare [7-9]. Infertility increases the risk of developing endometriosis to 50% [10-12]. The most frequent complication of endometriosis, requiring surgical intervention, is gastrointestinal obstruction. In this report we present a case of a patient with endometrial tumor at the level of caecum causing intussusception of the ileum to the transverse colon.

Case report

A 39-year-old female was admitted to the Department of Internal Medicine, Maritime Hospital, Gdynia due to diarrhea accompanied by epigastric and right mid-abdominal pain. The pain began 7 days previously and its intensity reached 7 points on the VAS scale [13]. The patient reported regular menstrual cycles and one physiological birth. Recent medical history included a pelvic inflammatory disease, successfully treated with antibiotics one month prior to admission. Surgical history included two laparotomies to remove myomas, 10 and 11 years prior. During a physical examination, the surgeon palpated a fist-sized tumor in the right mid-abdomen. There was no abdominal guarding and the peritonitis signs were negative. On auscultation, peristalsis was increased without signs of obstruction (no 'metallic sounds'). The per rectum examination was negative. (Figure 4).

The gynecological and transvaginal ultrasound revealed the presence of a uterine myoma and a left ovarian cyst. The gastrointestinal x-ray showed stoppage of the barium at the level of the ileocecal valve and a blurred picture of the right side of the abdomen. No fluid levels were seen and partial obstruction was diagnosed. The abdominal ultrasound revealed dilation of the ascending and transverse colon up to 67 mm for a length of 25 cm. (Figure 3). Abdominal computer tomography showed a colon containing the intussuscepted ileum with gas bubbles in its walls. Based on the clinical picture and the imaging study, the patient was qualified for exploratory laparotomy. (Figure 1).

The intraoperative examination revealed intussusception of a 30 cm-long section of the ileum with the mesoileum. During the reduction of the ileum, a tumor of the caecum and an edematous appendix were visualized. Due to suspicion of malignancy, a right hemicolectomy with ileo-transversal anastomosis was performed. The postoperative period was uneventful and the patient was discharged on day 5. Macroscopically, the tumor was 5x4cm in size and infiltrating the entire thickness of the caecum. The microscopic examination confirmed endometriosis infiltrating the serous, muscular and mucosal layers. The adjacent lymph nodes were inflamed. The immunohistochemical examination was positive for cytokeratin 7 and CD10 factor, while negative for cytokeratin 20. (Figure 2).

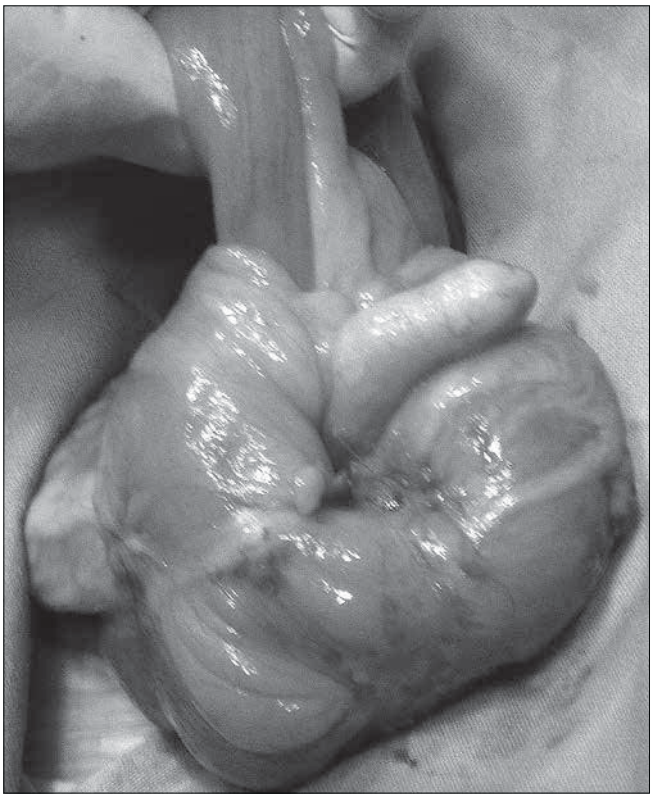

Figure 1.

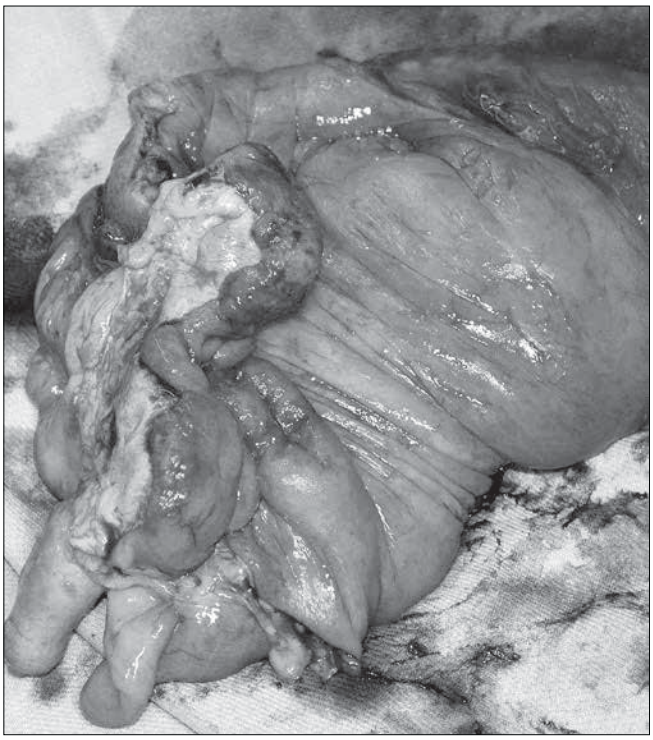

Figure 2.

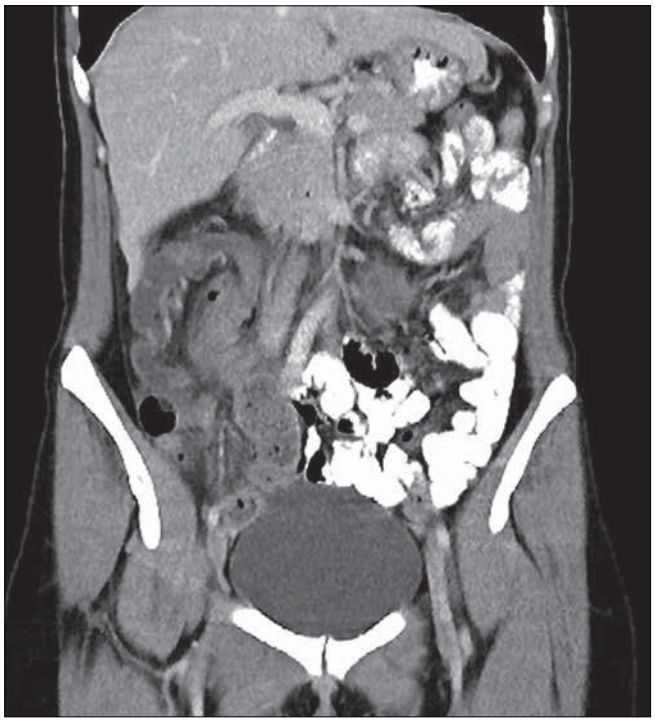

Figure 3.

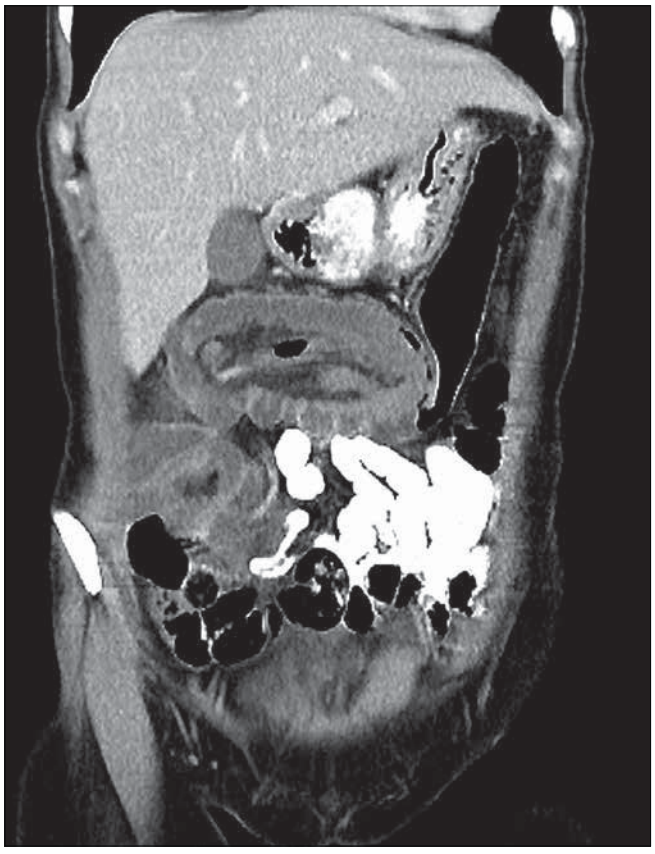

Figure 4.

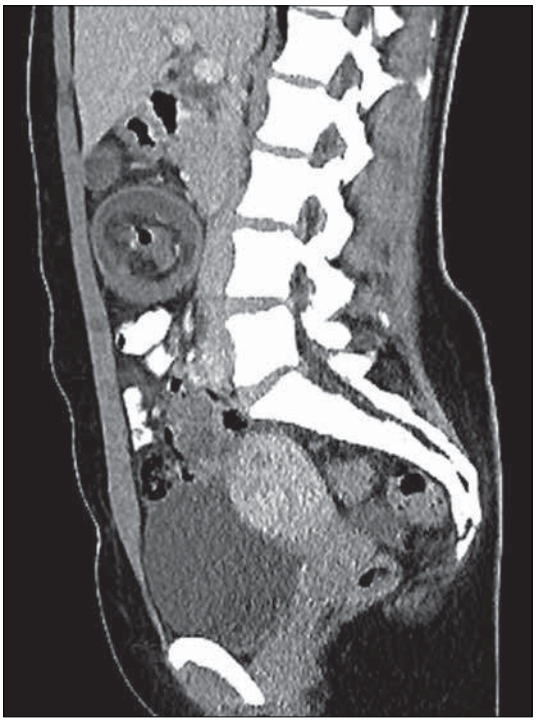

Figure 5.

Discussion

Only 5% of intussusception cases occur in adults. It frequently causes intestinal obstruction. Based on an analysis of 58 patients, Azar and Berger demonstrated that organic changes are the most frequent (93%) cause of intussusception, of which 52% were benign tumors and 48% were neoplasms [14].

In a similar analysis of 34 patients, Studenbord and Thorbjarnarson showed that the most frequent symptoms of intussusception were: pain (89%), nausea (82%) and emesis (74%) [15]. Although 24% of these patients had a palpable tumor on physical examination, none of the cases mentioned endometriosis. Symptoms of intussusception are not specific, therefore they may suggest exacerbations of many chronic diseases and present a diagnostic challenge.

Endometrial foci may slow peristalsis and cause mechanical obstruction, but they seldom cause intussusception [16-18]. Intussusception due to endometriosis occurs rarely, therefore there are no reliable statistical sources regarding this complication. Despite detailed examination and diagnostic tests (USG, CT), performed as suggested among others in a study by Basta, Brucka, Gorski et al. [19], the real cause of all the symptoms was not known until histopathological examination. For these reasons, case reports describing clinical presentation, diagnosis and treatment outcome of endometriosis have a greater applicability in clinical practice. (Figure 5).

Disclosure

The authors have no conflicts of interest to declare.

References:

1. Remorgida V, Ferrero S, Fulcheri E, [et al.]. Bowel endometriosis, presentation, diagnosis, and treatment. *Obstet Gynecol Surv.* 2007, 62, 461-470.
2. Camagna O, Dhainaut C, Dupuis O, [et al.]. Surgical management of rectovaginal septum endometriosis from a continuous series of 50 cases. *Gynecol Obstet Fertil.* 2004, 32, 199-209.
3. Delpy R, Barthet M, Gasmi M, [et al.]. Value of endorectal ultrasonography for diagnosing rectovaginal septal endometriosis infiltrating the rectum. *Endoscopy.* 2005, 37, 357-361.
4. Robboy SJ, Bean SM. Pathogenesis of endometriosis. *Reprod Biomed Online.* 2010, 21, 4-5.
5. Abrano MS, Neme RM, Averbach M. Rectovaginal septum endometriosis, a disease with specific diagnosis and treatment. *Arq Gastroenterol.* 2003, 40, 192-197.
6. Al-Khawaja M, Tan PH, MacLennan GT, [et al.]. Ureteral endometriosis, clinicopathological and immunohistochemical study of 7 cases. *Hum Pathol.* 2008, 39, 954-959.
7. Tunuguntla A, Van Buren N, Mathews MR, Ehrenfried JA. Endometriosis of the pancreas presenting as a cystic pancreatic neoplasm with possible metastasis. *South Med J.* 2004, 97, 1020-1021.
8. Tuech JJ, Rousselet MC, Boyer J, [et al.]. Endometrial cyst of the liver, case report and review. *Fertil Steril.* 2003, 79, 1234-1236.
9. Huang WT, Chen WJ, Chen CL, [et al.]. Endometrial cyst of the liver, a case report and review of the literature. *J Clin Pathol.* 2002, 55, 715-717.
10. Vigano P, Parazzini F, Somigliana E, Vercellini P. Endometriosis, epidemiology and aetiological factors. *Best Pract Res Clin Obstet Gynaecol.* 2004, 18, 177-200.
11. Cramer DW, Missmer SA. The epidemiology of endometriosis. *Ann N Y Acad Sci.* 2002, 955, 11-22, discussion 34-16, 396-406.
12. Child TJ, Tan SL. Endometriosis, aetiology, pathogenesis and treatment. *Drugs.* 2001, 61, 1735-1750.
13. Hjermstad MJ, Fayers PM, Haugen DF, [et al.]. Studies comparing Numerical Rating Scales, Verbal Rating Scales, and Visual Analogue Scales for assessment of pain intensity in adults, a systematic literature review. *J Pain Symptom Manage.* 2011, 41, 1073-1093.
14. Azar T, Berger DL. Adult intussusception. *Ann Surg.* 1997, 226, 134-138.
15. Stubenbord WT, Thorbjarnarson B. Intussusception in adults. *Ann Surg.* 1970, 172, 306-310.
16. Fama R, Bonotto G, Baraglia E, [et al.]. Intestinal obstruction due to endometriosis of the ileocecal valve. *Minerva Chir.* 1994, 49, 1325-1328.
17. Indraccolo U, Trevisan P, Gasparin P, Barbieri F. Cecal endometriosis as a cause of ileocolic intussusception. *JSLS.* 2010, 14, 140-142.
18. De Ceglie A, Bilardi C, Blanchi S, [et al.]. Acute small bowel obstruction caused by endometriosis, a case report and review of the literature. *World J Gastroenterol.* 2008, 14, 3430-3434.
19. Basta A, Brucka A, Gorski J, [et al.]. [The statement of Polish Society's Experts Group concerning diagnostics and methods of endometriosis treatment]. *Ginekol Pol.* 2012, 83, 871-876. Polish.

Wkład pracy poszczególnych autorów:

1. Walczak Piotr – autor koncepcji i założeń pracy, zbieranie materiału, przygotowanie manuskryptu i piśmiennictwa – autor zgłaszający i odpowiedzialny za manuskrypt.
2. Sobczak Ewa – zebranie materiału, przygotowanie manuskryptu.
3. Szefel Jarosław – współautor tekstu pracy, współautor protokołu, korekta i aktualizacja literatury.
4. Kruszewski Wiesław Janusz – współautor założeń pracy, korekta i akceptacja ostatecznego kształtu manuskryptu.

Źródło finansowania:

Praca nie była finansowana przez żadną instytucję naukowo-badawczą, stowarzyszenie ani inny podmiot, autorzy nie otrzymali żadnego grantu.

Konflikt interesów:

Autorzy nie zgłaszają konfliktu interesów oraz nie otrzymali żadnego wynagrodzenia związanego z powstawaniem pracy.