ILEAL ENDOMETRIOSIS – A RARE CAUSE OF BOWEL OBSTRUCTION

Florentina Mușat[1,2], Alexandra Bolocan[1,2], Daniel Ion[1,2], Octavian Andronic[1,2], Cosmin Alexandru Palcău[1], Octav Ginghină[2,3], Ioana Mirela Oacheșu[2], Dan Nicolae Păduraru[1,2]

[1] General Surgery Department, University Emergency Hospital of Bucharest, Romania
[2] "Carol Davila" University of Medicine and Pharmacy Bucharest, Romania
[3]"Prof. Dr. Al. Trestioreanu" Institute of Oncology Bucharest, Romania

CASE REPORT

Doi: 10.33695/rojes.v4i2.64
Accepted: 26.10.2022

Abstract

Endometriosis consists in the development of endometrial tissue outside the uterine cavity. Among the digestive segments, the most frequently affected by endometriosis are the recto-sigmoid, followed by the ascending colon, the small intestine and the appendix. Intestinal occlusion due to endometriosis represents 0.1-0.7% of all cases of intestinal occlusion. We report the case of a woman that presented with acute bowel obstruction due to ileal endometriosis. The patient was diagnosed and admitted at University Emergency Hospital Bucharest and has been prospectively followed since June 2022 and data included in the current report has been collected up to December 2022. The patient was a 35-year-old, non-smoker, nuliparous, female, without a significant medical history, that presented to the emergency room accusing diffuse abdominal pain, nausea and vomiting, symptoms that have been evolving for approximately 24 hours and progressively worsened. The patient denied the use of oral contraceptive drugs or other medication. Right ileo-hemicolectomy with end-to-end ileo-colonic anastomosis and right ovary biopsy is performed. The histopathological analysis indicates the presence of endometriosis foci both at the level of the enteral resection segment and at the level of the biopsied right ovary. Intestinal occlusion due to endometriosis is a rare condition. It can take by surprise the clinician in the emergency room, but it is a valid diagnosis in case of a young women, with or without a previous diagnosis of endometriosis, with history of infertility or chronic pelvic pain, presenting with occlusive symptomatology, without any previous abdominal procedures. The intraoperative aspect of the lesions is frequently misleading due to the resemblance of the endometrial foci with cancerous masses.

Corresponding author:
octavginghina@gmail.com

Keywords: endometriosis, bowel obstruction, ileum

Introduction

Endometriosis consists in the development of endometrial tissue outside the uterine cavity. It is estimated that 1 in 10 women is diagnosed with this pathology that it is more frequently encountered in Caucasian women than in African American population [1], [2]. The foci of endometriosis can have multiple locations, being more frequently found in the pelvis (fallopian tubes, ovaries, ligaments of the uterus). Other less common

locations include the small intestine, large intestine, abdominal wall, lymph nodes [3]. Among the digestive segments, the most frequently affected by endometriosis are the recto-sigmoid, followed by the ascending colon, the small intestine and the appendix [4].

We report the case of a woman that presented with acute bowel obstruction due to ileal endometriosis. The patient was diagnosed and admitted at University Emergency Hospital Bucharest and has been prospectively followed since June 2022 and data included in the current report has been collected up to December 2022.

Case presentation

A 35-year-old, non-smoker, nuliparous, female patient, without a significant medical history, presents to the emergency room accusing diffuse abdominal pain, nausea and vomiting, symptoms that have been evolving for approximately 24 hours and progressively worsened. The patient denied the use of oral contraceptive drugs or other medication. The physical examination reveals a slightly distended abdomen, diffusely painful spontaneously and on palpation, more pronounced in the lower half of the abdomen, without signs of peritoneal irritation.

The blood tests drawn at the emergency room indicated the presence of leukocytosis (leukocytes value of 19800/mm*3), but the rest of the parameters were within normal range. Abdominal X-ray revealed the presence of several enteral air-fluid levels in the lower half of the abdomen, without pneumoperitoneum (Figure 1). Abdominal ultrasound describes the presence of a 20 mm liquid sheet located endopelvic and between the small bowel loops. It was decided to perform a computerized tomography which highlighted isolated free air bubbles in the peritoneal cavity visible in the hepatic hilum and adjacent to the duodenal bulbar wall, with edematous duodenal parietal thickening. Also, the tomography detected an important distension of the enteric loops with air-fluid levels, especially the ileal ones, which appeared adherent to the distal sigmoid, but also to the right ovary which appeared to have an inhomogeneous structure (Figure 2). The presence of a small impure interhepato-renal and interileal peritoneal effusion with an appearance suggestive of peritonitis was also observed. Abdominal-pelvic adenopathy were not described.

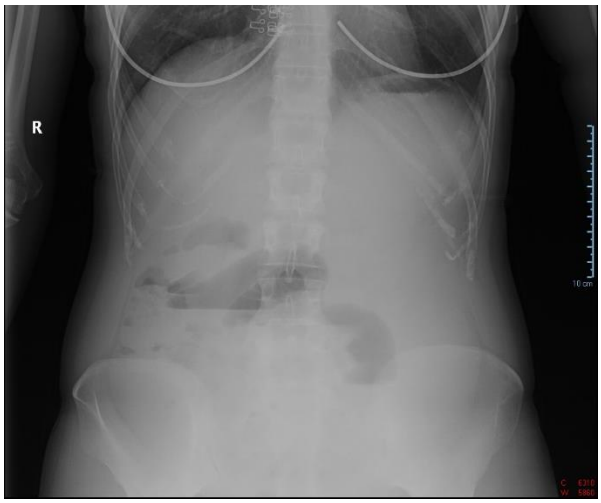

Figure 1 – Abdominal x-ray revealing small bowel air-fluid levels

Figure 2 – Cross sectional computed tomography of the abdomen revealing enteric loop distension. Bowel loops adherent to an inhomogeneous right ovary

Under general anesthesia, emergency surgery was performed through a midline laparotomy. The intraoperative findings consisted of: a medium amount of sero-citrine liquid, small intestine loops distended from the

level of the duodeno-jejunal angle up to 3 cm from the ileo-cecal valve where a 5 cm diameter, stenosing, tumoral mass is identified; the colon had a normal aspect; the right ovary appeared tumoral transformed and participated, together with the left ovary, the uterus and the rectum, in the formation of a pelvic inflammatory block. Right ileo-hemicolectomy with end-to-end ileo-colonic anastomosis and right ovary biopsy is performed.

The postoperative evolution is favorable. The patient remains hemodynamically and respiratory stable, resumes intestinal transit for fecal matter and gases and is discharged 7 days postoperatively with good digestive tolerance.

The histopathological analysis indicates the presence of endometriosis foci both at the level of the enteral resection segment (Figure 3) and at the level of the biopsied right ovary (Figure 4). The patient was then referred to a gynecology specialist who initiated oral treatment with Dienogest (Zafrilla) and recommended gynecological reassessment every 3 months.

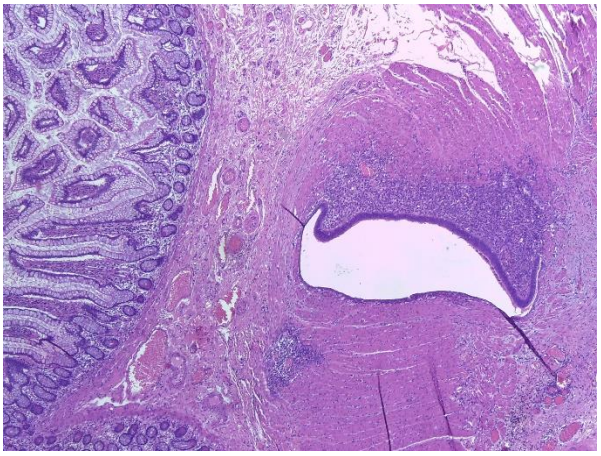

Figure 3 – Histopathological aspect of the ileal endometriosis in hematoxylin and eosin staining (4x magnification)

Discussions

Depending on the digestive segment affected, intestinal endometriosis can be asymptomatic or it can manifest chronically through a series of symptoms represented by bloating, nausea, hematochezia, transit disorders such as diarrhea or constipation and abdominal pain [5].

This clinical setting requires a differential diagnosis with pelvic inflammatory diseases. In some cases, patients of fertile age, with or without a documented history of endometriosis, present to the emergency room with an acute abdomen caused by intestinal occlusion or digestive perforation [6]. However, these situations are rare, intestinal occlusion due to endometriosis representing 0.1-0.7% of all cases of intestinal occlusion [7]. Much rarer, but cited in the literature, are the cases of intestinal occlusion due to endometriosis in menopausal patients [8].

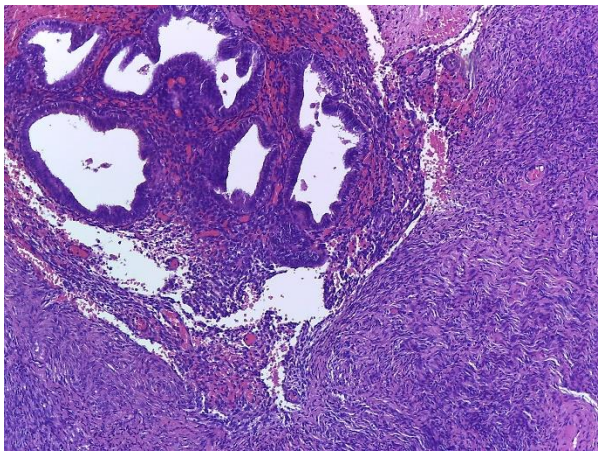

Figure 4 – Histopathological aspect of the ovarian endometriosis in hematoxylin and eosin staining (4x magnification)

Although the initial evaluation of patients with acute abdomen includes performing a computed tomography, this investigation cannot differentiate the endometrial lesion from a tumoral mass of another nature [2]. Although it is not routinely performed in the emergency room, magnetic resonance imaging has a high sensitivity in diagnosing intestinal endometriosis [9]. Also, the macroscopic, intraoperative appearance of the lesion is not characteristic. The endometrial mass can have the appearance of

an ulcerated, stenotic mass developed intraluminal or of a mass developed in the thickness of the intestinal wall, with intact overlying mucosa. Non-stenosing masses can cause intestinal occlusion through the phenomenon of intussusception [10]–[14]. Also, the digestive segments can be strangled by fibrin bands from the adhesion syndrome associated with endometriosis [15]. The case of a voluminous endometrial cyst, developed at the level of the omentum, which causes extrinsic compression of the loops of small intestines, is also described in literature [16]. In the presented case, the mechanism of intestinal occlusion consisted in the presence of a stenotic mass at the level of the terminal ileum. Intraoperatively, multiple adenopathies can also be found which, following the histopathological examination, are either reactive or contain endometrial tissue [17]. The association of other intraperitoneal lesions is not constant. Sometimes, intraoperatively, cysts or tumor masses can be seen at the level of the ovaries or the ligaments of the uterus. Sometimes, the chronic inflammation specific to this pathology causes the thickening of the peritoneum and the "welding" of the viscera in the pelvis.

Conclusions

Intestinal occlusion due to endometriosis is a rare condition. It can take by surprise the clinician in the emergency room, but it is a valid diagnosis in case of a young women, with or without a previous diagnosis of endometriosis, with history of infertility or chronic pelvic pain, presenting with occlusive symptomatology, without any previous abdominal procedures. The intraoperative aspect of the lesions is frequently misleading due to the resemblance of the endometrial foci with cancerous masses.

References

[1] K. T. Zondervan, C. M. Becker, and S. A. Missmer, "Endometriosis," New England Journal of Medicine, vol. 382, no. 13, pp. 1244–1256, Mar. 2020, doi: 10.1056/NEJMra1810764.

[2] B. J. Hwang, N. Jafferjee, A. Paniz-Mondolfi, J. Baer, K. Cooke, and D. Frager, "Nongynecological endometriosis presenting as an acute abdomen," Emerg Radiol, vol. 19, no. 5, pp. 463–471, Oct. 2012, doi: 10.1007/s10140-012-1048-x.

[3] D. Ion et al., "Concomitant inguinal endometriosis and groin hernia - Case report," Archives of the Balkan Medical Union, vol. 52, no. 4, pp. 462–466, Dec. 2017.

[4] A. de Ceglie et al., "Acute small bowel obstruction caused by endometriosis: A case report and review of the literature," World J Gastroenterol, vol. 14, no. 21, pp. 3430–3434, 2008, doi: 10.3748/wjg.14.3430.

[5] M. A. Ávila Vergara, V. Sánchez Carrillo, and F. Peraza Garay, "Bowel obstruction secondary to deep infiltrating endometriosis of the ileum," Revista Espanola de Enfermedades Digestivas, vol. 110, no. 3. ARAN Ediciones S.A., pp. 208–209, Mar. 01, 2018. doi: 10.17235/reed.2018.5364/2017.

[6] B. Laiz Díez, A. García Muñoz-Najar, and M. Durán Poveda, "Laparoscopic management of a small bowel obstruction caused by an endometriotic focus," Rev Esp Enferm Dig, vol. 111, no. 11, pp. 887–888, Nov. 2019, doi: 10.17235/reed.2019.6220/2019.

[7] Z. Allan, "A case of endometriosis causing acute large bowel obstruction," Int J Surg Case Rep, vol. 42, pp. 247–249, 2018, doi: 10.1016/j.ijscr.2017.12.031.

[8] B. Bidarmaghz, A. Shekhar, and R. Hendahewa, "Sigmoid endometriosis in a post-menopausal woman leading to acute large bowel obstruction: A case report," Int J Surg Case Rep, vol. 28, pp. 65–67, 2016, doi: 10.1016/j.ijscr.2016.09.008.

[9] M. Quicray, B. Darwish, V. Bridoux, and H. Roman, "Bowel occlusion in an infertile woman with documented deep endometriosis of the sigmoid colon: Why was it not unexpected?," Gynecol Obstet Fertil, vol. 44, no. 12, pp. 727–729, Dec. 2016, doi: 10.1016/j.gyobfe.2016.09.008.

[10] C. A. Morales-Morales et al., "Ileocolonic intussusception due to severe endometriosis," Clin

J Gastroenterol, vol. 14, no. 5, pp. 1381–1385, Oct. 2021, doi: 10.1007/s12328-021-01473-9.
[11] I. Koutsourelakis, H. Markakis, S. Koulas, N. Mparmpantonakis, E. Perraki, and K. Christodoulou, "Ileocolic Intussusception Due to Endometriosis," 2007.
[12] H. Katagiri, A. K. Lefor, T. Nakata, T. Matsuo, and I. Shimokawa, "Intussusception secondary to endometriosis of the cecum," Int J Surg Case Rep, vol. 5, no. 12, pp. 890–892, 2014, doi: 10.1016/j.ijscr.2014.10.047.
[13] R. K. M. D. C. D. Ranaweera, S. M. K. Gamage, D. H. B. Ubayawansa, and M. M. J. Kumara, "Terminal ilial intussusception in an adult due to endometriosis," BMC Res Notes, vol. 9, no. 1, 2016, doi: 10.1186/s13104-016-2029-z.
[14] L. Benigno, L. Lisarelli, R. Sortino, J. Neuweiler, and T. Steffen, "A rare case of ileocolic intussusception due to severe endometriosis," J Surg Case Rep, vol. 2020, no. 6, Jun. 2020, doi: 10.1093/jscr/rjaa116.
[15] J. D. W. Choi and M. Yunaev, "Endometriosis of the appendix causing small bowel obstruction in a virgin abdomen," BMJ Case Rep, vol. 12, no. 7, Jul. 2019, doi: 10.1136/bcr-2019-230496.
[16] Antoine Naem, Anwar Shamandi, Ali Al-Shiekh, and Bayan Alsaid, "Free large sized intra-abdominal endometrioma in a postmenopausal woman: a case report," BMC Womens Health, vol. 20, no. 1, Sep. 2020.
[17] G. Preziosi, M. Cristaldi, and L. Angelini, "Intestinal obstruction secondary to endometriosis: A rare case of synchronous bowel localization," Surgical Oncology, vol. 16. pp. 161–163, Dec. 2007. doi: 10.1016/j.suronc.2007.10.002.
.