ANNALI ITALIANI DI CHIRURGIA

Digital Edition
e-publish on-line
ISSN 2239-253X
Direttore Nicola Picardi

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Ann Ital Chir, 2023; 12 - July 24
pii: S2239253X23033455
Online Epub

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Intestinal Endometriosis. A rare cause of acute abdomen

Endometriosis is defined as the presence of endometrial glands and stroma outside the uterine cavity. Its incidence is reported to be approximately 5%–15% in the reproductive age group. While endometriosis usually occurs on pelvic organ and peritoneal surfaces, it rarely occurs extra-abdominally. Intestinal endometriosis involves the localisation of functional endometrial tissue in the intestinal system. However intestinal obstruction due to severe stenosis of the small bowel obstruction, as in the case described by the authors, is rare. Surgical treatment - resection and anastomosis or conservative procedures - provides better results especially when a multidisciplinary approach is used (surgeon, gynecologist, and gastroenterologist). The authors report a case of obstruction of the small bowel obstruction due to endometriosis and analyse the pathophysiology, diagnosis and surgical management of this disorder.

KEY WORDS: Intestinal endometriosis, Intestinal occlusion, Surgery

Introduction

Endometriosis is defined as the presence of endometrial glands and stroma outside the uterine cavity [1]. Its incidence is reported to be approximately 5%–15% in the reproductive age group [2]. While endometriosis usually occurs on pelvic organ and peritoneal surfaces, it rarely occurs extra-abdominally [3].
The endometrial tissues can be present intraperitoneally in uterosacral ligaments, the pelvic peritoneum, the pouch of Douglas and the gastrointestinal tract. It can also be present extraperitoneally in the cervix, vagina and round ligament and extra-abdominally in the lungs, urinary system, skin and brain [4].
Intestinal endometriosis involves the localisation of functional endometrial tissue in the intestinal system. İt most commonly occurs in the rectosigmoid (74%) and rectovaginal septum (12%). To a lesser extent, the small intestines, cecum (2%) and appendix (3%) can also be involved [5]. While endometriosis usually involves the serosal or subserosal layer, it can involve all layers of the colon in some cases [6]. In the rare cases in which the disease affects small bowel, it is most often found in the distal ileum (1% of cases), and usually involves the serosa [7]. It may cause partial occlusion of the intestinal passage due to scar formation, retraction and mass formation.
The authors report a case of intestinal endometriosis in which the clinical picture and imaging suggested a diagnosis of intestinal occlusion due to a mass in the terminal ileum, with indication to emergency terminal ileum resection.

Pervenuto in Redazione Maggio 2020. Accettato per la compozione Giugno 2020
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Case

A 26-year-old nulliparous woman visited our hospital about 10 days ago with complaints of abdominal pain, nausea, vomiting and diarrhoea. Based on the examination results, the patient was sent home after providing treatment for gastroenteritis. Although her complaints resolved for several days after the treatment, she presented to our hospital's emergency department as her symptoms recurred and became more severe. The examination of the patient revealed extensive abdominal tenderness and abdominal defense. The patient was dehydrated and agitated and was conscious but confused. The anamnesis taken from her family revealed that she was currently menstruating and had similar but milder complaints when menstruating during the past 6 months. There was no history of prior surgery. A direct abdominal x-ray showed air-fluid levels. With the pre-diagnosis of ileus, tomography was performed for the differential diagnosis of the patient. Tomography revealed a mass in the terminal ileum (Fig. 1A, 1B), confirming the diagnosis of ileus. Based on these findings, emergency surgery was performed after obtaining consent from the patient's relatives. During exploration, approximately 500 cc of serous fluid was detected in the abdomen. In addition, a mass was observed, which obstructed the terminal ileum and resulted in bowel loops of approximately 10 cm. The mass was resected, and an end ileostomy was performed. Endometriosis was diagnosed on the basis of the pathological findings of the patient (Fig. 1C, 1D), who did not have any symptoms in the postoperative period. The patient was referred to the obstetrics clinic. Her ileostomy was closed approximately 2.5 months after the surgery.

Discussion

The etiopathogenesis of endometriosis is not yet fully understood. Many theories have been proposed to explain the etiopathogenesis, e.g. the metaplasia theory, induction theory and transplantation theory. Of these, the transplantation theory proposed by Sampson is the most accepted theory. According to Sampson, endometriosis develops when the endometrial cells retrogradely reach the fallopian tubes and then reach the pelvic structures, where they get implanted [8]. However, this theory cannot explain the endometriosis occurring in distant organs. According to Halban, endometrial cells reach outside the uterus, pass into the lymphovascular ducts and enter the peripheral circulation of a distant organ, eventually settling in that organ [9]. The involvement of the pelvic peritoneum, the presence of persistent symptoms and the increase in the severity of symptoms in the present case are suggestive of terminal ileum involvement, according to the transplantation theory.

Intestinal involvement is not common in patients with endometriosis; approximately 27% of patients have intestinal involvement. The symptoms of intestinal endometriosis depend on the severity and localisation of the disease. The severity of the disease, however, depends on the depth of invasion in the intestinal wall. If the involvement is too superficial and small, there are almost no symptoms. Some patients may have different endometriosis foci with superficial and deep localisations. Deep, large, localised endometriosis can cause several symptoms, such as periodic rectal bleeding, severe pelvic pain, abdominal pain, constipation, diarrhoea and gas. Of these, rectal bleeding is the most important symptom [10,11]. While the symptoms may be mild or severe,

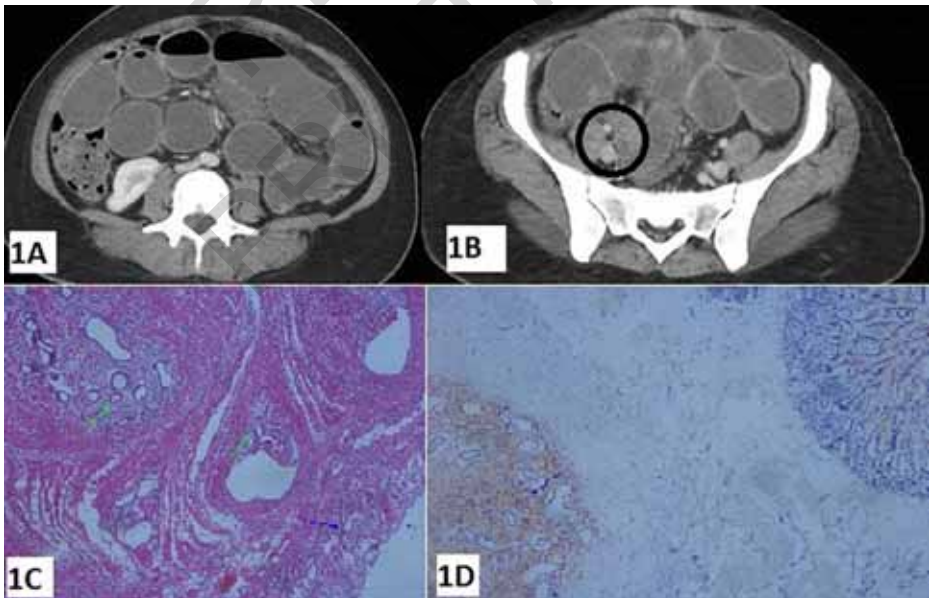

Fig. 1: Pathology images of the patient. A) Cross section shows the glandular structures (green arrows) and small bowel mucosa (blue arrow) of the endometrium (H & Ex40). B) Positive staining with cd10 is observed in the endometrium stroma in the sections (CD10 x 40).Tomography images of the patient. C) Dilatation and air fluid levels compatible with ileus in small bowel loops. D) There is a suspicious mass appearance that keeps contrast at the distal ileum level (black circle).

stenosis and signs of an acute abdomen may also be observed in the intestines. If the diagnosis of colonic endometriosis is delayed, perforation and peritonitis may occur because of an acute abdomen caused by bowel obstruction. In the present case, the patient's complaints started with gastrointestinal symptoms and rapidly progressed to an acute abdomen secondary to bowel obstruction.

Endometriosis is usually diagnosed via a preliminary diagnosis based on clinical suspicion arising from the anamnesis. While radiological imaging methods (such as ultrasonography and MRI) are used for diagnosis, a definitive diagnosis can be made by the histopathological examination of biopsies obtained via laparotomy.

Recent studies have revealed that deep endometriosis and intestinal endometriosis can be clinically diagnosed using transvaginal USG and that this method is more effective than MRI [12,13]. However, in these studies, patients with severe dysmenorrhea have been evaluated in detail by obstetricians. In the present case, as intestinal symptoms were more prominent, the patient was examined in the gastroenterology clinic. As the symptoms of intestinal endometriosis may be similar to those of other diseases, such as Crohn's disease, appendicitis, ischemic colitis, diverticulitis, solitary rectal ulcer and malignancies [6,14], accurate diagnosis can be delayed. In the present case, although the patient had symptoms since 6 months, the diagnosis was delayed. Therefore, it is necessary to take a detailed anamnesis, especially in the case of female patients. Collaborative efforts of gastroenterologists, gynaecologists, surgeons, radiologists and pathologists are needed for the diagnosis and treatment. The treatment of intestinal endometriosis is mostly surgical [15]. The response to different hormone suppression treatments is generally not good. Medicines can be prescribed for patients who cannot undergo surgery for any reason. Danazol, gonadotropin-releasing hormone, oral contraceptives and prostaglandin inhibitors can be used in such patients. Pain, bleeding, changes in bowel habits and bowel obstruction are indications for surgery. In the present case, as the acute abdomen was present at the time of admission, the patient was treated with emergency surgical intervention.

In conclusion, intestinal endometriosis, which is a rare cause of acute abdomen, should be considered in the diagnosis of an acute abdomen in female patients of reproductive age.

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