

Case Report

Endometriosis-induced hemoperitoneum in the colonic serosa

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Endometriosis is an inflammatory disease. The etiology of endometriosis is exactly unknown. A 42-year-old virgin experienced a sudden increase in pain that began one day prior to examination. She had been suffering from dysmenorrhea and menorrhagia. The patient had abdominal guarding with severe rebound tenderness. On computed tomography, both ovaries were normal, and sigmoid colon was seen in the peripheral portion of the pelvic hematoma. Pathologic findings revealed endometriosis in the colonic serosa cyst. Our data provide a new diagnostic key for hemoperitoneum caused by endometriosis in the colonic serosa.

Key words: Hemoperitoneum, endometriosis, colon.

INTRODUCTION

Endometriosis is a chronic inflammatory gynecologic disease. Infertility is the primary complication associated with endometriosis, and dysmenorrhea or dyspareunia may also be associated. The etiology of endometriosis is unknown, but prevailing theories include coelomic metaplasia and retrograde menstruation (Bellelis et al., 2011).

Extrapelvic endometriosis results from an endometriotic implantation, observed most commonly in the gastrointestinal tract, but also found in the urinary, pulmonary or central nervous system, skin, or other organ (Dimoulios et al., 2003).

This condition is rare and its prevalence is unknown. Because patients with intestinal endometriosis frequently report symptoms of rectal bleeding, bowel obstruction, and rarely, perforation, they are often misdiagnosed with cancer (Dimoulios et al., 2003).

The present case study reports on a patient with a hemoperitoneum that was misdiagnosed as ovarian cyst rupture.

CASE REPORT

A 42-year-old woman arrived in the emergency room with symptoms of abdominal pain. Her obstetric history revealed that she has never been pregnant or given birth (TPAL 0-0-0-0) and she had no relevant family history. She had been suffering from dysmenorrhea and menorrhagia, and reported cyclical abdominal pain during menstruation. According to her past history, she had experienced lymphedema during cardiac surgery. Direct tenderness and rebound tenderness were noted upon abdominal examination. The patient's blood pressure was normal (100/70 mmHg) and her pulse rate was 100 bpm. Her hemoglobin level was 10.9 g/d and a urine human chorionic gonadotropin test was negative. Ultrasonography revealed a collection of fluid and a left adnexal mass (4.2 × 2.8 cm). On computed tomography, both ovaries appeared normal and the sigmoid colon was observed in the peripheral portion of the pelvic hematoma (Figure 1A to C).

Laparoscopy revealed a subserosal myoma in the uterus, bilateral normal ovaries, and a 1000-cc hemoperitoneum. A serosal cyst with a hematoma and subserosal myoma were removed from the colon (Figure 2). Pathologic findings revealed endometriosis in the colonic serosal cyst. No abnormal complication was

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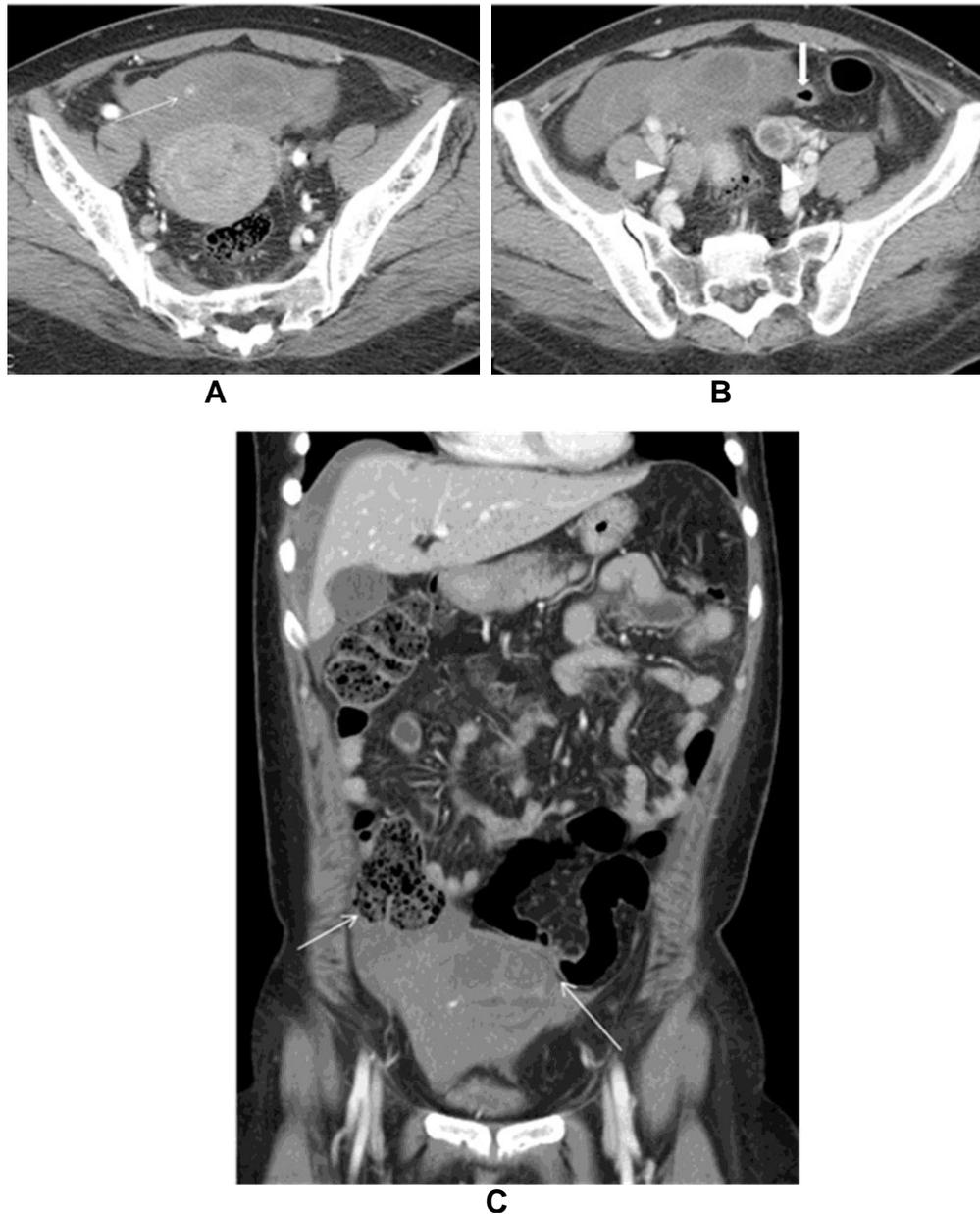


Figure 1. (A, B) In lower abdominal cavity, about 13 × 5 × 9 cm sized hematoma is seen. In the hematoma, multiple cystic lesions are seen with a high density spot indicating active bleeding (arrow). Both ovaries are noted on the posterior aspect of the hematoma (arrowheads). Sigmoid colon is seen on the peripheral portion of the pelvic hematoma (thick arrow). (C) Coronal reformatted image of enhanced CT scan showed pelvic hematoma with active bleeding spot. Multiple low density round lesions are also seen within the hematoma and the hematoma was abutting cecum and sigmoid colon (arrows).

noted following surgery and the patient was treated with a gonadotropin-releasing hormone agonist for 6 months.

FINDINGS AND DISCUSSION

Endometriosis is an inflammatory disease that affects 10

to 15% of reproductive-aged women (Bulun, 2009). Increased exposure to estrogen at an early age (that is, early menarche), short menstrual cycle length, and nulliparity increase the risk for endometriosis (Trabert et al., 2011). Other risk factors include a diet low in beta-carotene and fruit. Environmental risk factors for endometriosis have also been investigated recently.

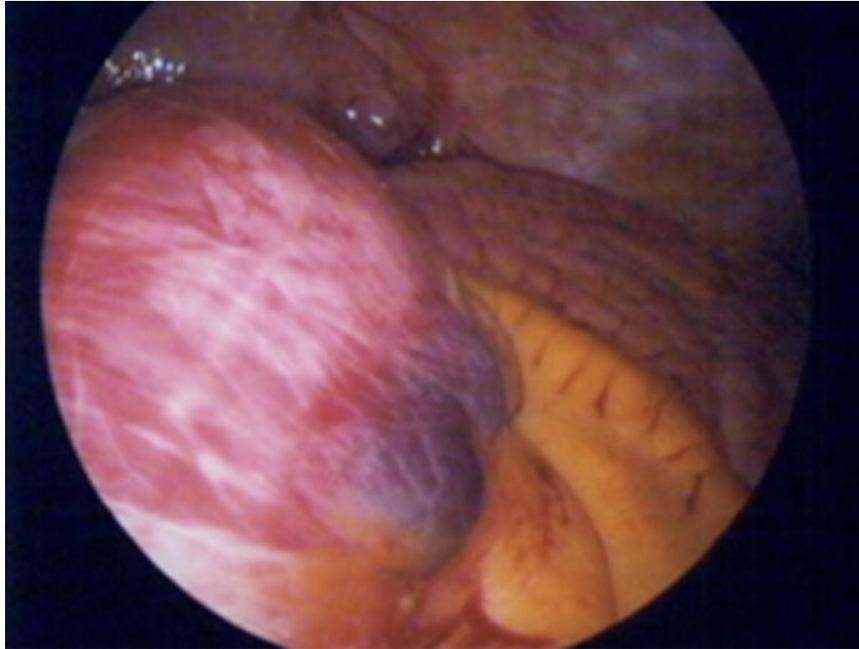


Figure 2. Serosal cyst (9 × 6 × 2 cm in size) with hematoma in colon was removed.

During pregnancy, women with endometriosis may experience preeclampsia and antepartum hemorrhage (Stephansson et al., 2009). Ultrasonographic diagnosis of endometriosis is difficult due to the variable appearance of this condition (Woodward et al., 2001).

Magnetic resonance imaging has greater specificity than other noninvasive imaging techniques for the diagnosis of endometriomas. Endometriosis shows relatively homogeneous high signal intensity on T1-weighted images (Woodward et al., 2001).

Previous studies have reported that ovarian endometriosis, but not non-ovarian endometriosis, can be accurately diagnosed on the basis of high-resolution ultrasonographic findings in combination with symptoms of dysmenorrhea, pelvic pain, and dyspareunia (Eskenazi et al., 2001).

Most cases of extrapelvic endometriosis are misdiagnosed, because the symptoms are ambiguous on physical examination. A confirmed diagnosis can only be made following laparoscopy and positive histologic laboratory results. In the urinary tract, the bladder is the most common site of endometriosis (Cho et al., 2007).

A previous study reported an urohemoperitoneum during pregnancy in a patient with deep endometriosis that resulted in fetal death (Chiodo et al., 2008). Endometriosis of the appendix has also been misdiagnosed as appendicitis (Abrao et al., 2005). Intestinal endometriosis occurs with asymptomatic, small, superficial serosal implants (Garg et al., 2009) and may involve bowel resection. Most commonly, it is diagnosed incidentally following an operation. Typically, intestinal endometriosis is observed as granular, bluish-red

nodules located on the serosa in the small intestine (Prystowsky et al., 1988).

To our knowledge, no previous report has described the development of a hemoperitoneum due to serosal endometriosis. Previous studies have reported a large hemoperitoneum due to actively bleeding endometriosis in the fallopian tube, a spontaneous uterine wall vessel rupture, and bleeding from endometriotic implants (Janicki et al., 2002).

An increased risk of bleeding as a result of infiltrating endometriosis should be considered in the diagnosis. Our patient reported cyclic pain during menstruation and dysmenorrhea. Her menstrual symptoms were not typical for intestinal endometriosis, but cyclic pain during menstruation should be considered in the diagnosis of ambiguous extrapelvic endometriosis. Our data provide a new diagnostic key for hemoperitoneum caused by endometriosis in the colonic serosa.

REFERENCES

- Abrao MS, Podgaec S, Carvalho FM, Goncalves MO, Dias JA, Jr., Averbach M (2005). Bowel endometriosis and mucocele of the appendix. *J. Minim. Invasive Gynecol.* 12:299-300.
- Bellelis P, Podgaec S, Abrão MS (2011). Environmental factors and endometriosis. *Rev. Assoc. Med. Bras.* 57:448-452.
- Bulun SE (2009). Endometriosis. *N. Engl. J. Med.* 360:268-279.
- Chiodo I, Somigliana E, Dousset B, Chapron C (2008). Urohemoperitoneum during pregnancy with consequent fetal death in a patient with deep endometriosis. *J. Minim. Invasive Gynecol.* 15:202-204.
- Cho HK, Lee GW, Kim JM, Kim YH, Kim ME (2007). Ureteral endometriosis. *Korean J. Urol.* 48:1179-1181.
- Dimoulios P, Koutroubakis IE, Tzardi M, Antoniou P, Matalliotakis IM,

- Kouroumalis EA (2003). A case of sigmoid endometriosis difficult to differentiate from colon cancer. *BMC Gastroenterol.* 3:18.
- Eskenazi B, Warner M, Bonsignore L, Olive D, Samuels S, Vercellini P (2001). Validation study of nonsurgical diagnosis of endometriosis. *Fertil. Steril.* 76:929-935.
- Garg NK, Bagul NB, Doughan S, Rowe PH (2009). Intestinal endometriosis--a rare cause of colonic perforation. *World J. Gastroenterol.* 15:612-614.
- Janicki TI, David LJ, Skaf R (2002). Massive and acute hemoperitoneum due to rupture of the uterine artery by erosion from an endometriotic lesion. *Fertil. Steril.* 78:879-881.
- Prystowsky JB, Stryker SJ, Ujiki GT, Poticha SM (1988). Gastrointestinal endometriosis. Incidence and indications for resection. *Arch. Surg.* 123:855-858.
- Stephansson O, Kieler H, Granath F, Falconer H (2009). Endometriosis, assisted reproduction technology, and risk of adverse pregnancy outcome. *Hum. Reprod.* 24:2341-2347.
- Trabert B, Peters U, De Roos AJ, Scholes D, Holt VL (2011). Diet and risk of endometriosis in a population-based case-control study. *Br. J. Nutr.* 105:459-467.
- Woodward PJ, Sohaey R, Mezzetti TP, Jr. (2001). Endometriosis: radiologic-pathologic correlation. *Radiographics* 21:193-216.