

## Ileal Endometriosis

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### ABSTRACT

*Endometriosis at the ileum site is a rare case and among the difficult cases of endometriosis. Intestinal endometriosis may cause obstructing symptoms, which is difficult to be distinguished from malignant or inflammatory disease. We report a case of 33-year-old woman, who admitted to the hospital because of sub-ileus intestinal obstruction. She underwent one session laparoscopy and laparotomy operation. Her ileum showed obstruction because of stenosis and adhesion with an ovarian brown cyst. She experienced terminal ileal resection, ileocaecostomy anastomosis, followed by laparotomy ovariectomy and appendectomy. Microscopic evaluation of the intestine revealed vascular congestion, lymph nodes inflammation, and typical endometrial glands in the muscle layer of ileum. There was no sign of malignancy. These findings led to the diagnosis of ileal endometriosis. The ovarian cyst was actually the endometrial cyst of the ovary.*

**Keywords:** *sub-ileus obstructive, ileal endometriosis, endometrial cyst*

### INTRODUCTION

Endometriosis is defined as an ectopic proliferation of endometrial tissue outside the uterine cavity. Two causative mechanisms have been proposed; (a) canalicular transport of endometrial shedding during menstruation and (b) growth of celomic epithelium into the myometrium of contiguous organs. Most patients with endometriosis do not have intestinal involvement. Among the difficult cases of endometriosis, only 27% have gastrointestinal (GI) involvement. The most common location of gastrointestinal endometriosis is lower recto sigmoid colon, followed by the last part of ileum, caecum and appendix. Thirty percent of patients have more than one GI area involved.<sup>1</sup> Intestinal endometriosis may cause obstructing symptom which is difficult to be distinguished from malignant or inflammatory disease.<sup>1</sup> We report a case of ileal endometriosis in a patient suffering from sub-ileus intestinal obstruction.

### CASE ILLUSTRATION

A 33-year-old premenopausal woman, who has delivered a child, was admitted to our hospital with a complaint of diarrhea 1 week ago. Three days before the admission she suffered from constipation, bloating, mid-abdominal colicky pain, followed by nausea and vomiting. One day before the admission, the abdomen became distended and the pain became more severe. She had been previously well, with good appetite and no weight loss. There was no history of rectal bleeding. Sometimes dysmenorrhea occurs during the menstrual cycle. Physical examination revealed good condition, neither anemia nor jaundice was found, the temperature was 37.5°C, blood pressure was 120/80 mmHg, the pulse rate was 88 times/minutes, and the respiration rate was 16 times/minutes. Heart and lung were normal. Abdominal examination revealed mild distention, no rigidity. No sign of darm contour and darm steifung. Palpation revealed generalized tenderness, pain in deep palpation, no mass was found. Liver and spleen were normal, tympanitic in percussion and high pitch borborigmi sound in auscultation. Rectal examination revealed no specific finding. Neurologic examinations were within normal limit. Her basic blood tests were

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normal. She underwent an abdominal ultrasound, which demonstrated a 67.4 x 54.1 mm<sup>2</sup> ovarian cyst with septations. Plain abdominal X-ray showed upper part of intestinal dilatation (figure 1-2).



Figure 1. The erect abdominal X-ray plain film shows air-fluid level at the upper part of intestinal

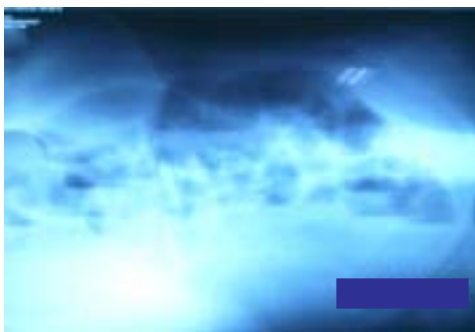


Figure 2. The left lateral decubitus view of abdominal X-ray shows air fluid level of upper part of intestinal

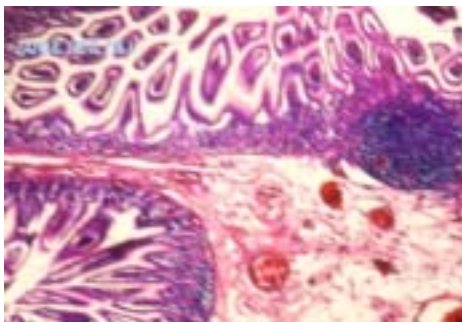


Figure 3. The intestinal mucosa and sub mucosa with blood vessels engorgement

The patient underwent one session laparoscopy and laparotomy. The ileum showed obstruction because of stenosis and adhesion adjacent to the intestinal with an ovarian brown cyst/endometriosis cyst. Terminal ileac resection and ileocaecostomy anastomosis were performed, followed by ovarian cystectomy and appendectomy. Microscopic evaluation of the intestine revealed vascular congestion, lymph nodes inflammation, and typical endometrial glands in the muscle layer of ileum. There was no sign of malignancy. These findings led to the diagnosis of ileal

endometriosis (figure 4-6). Ovarian cyst was actually endometrial cyst of the ovary.

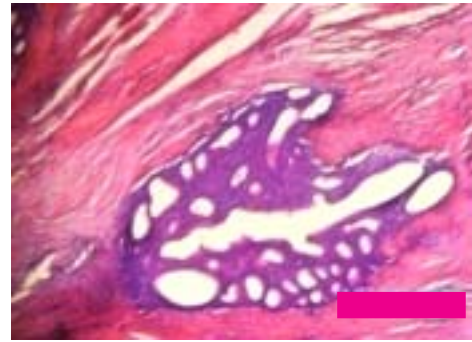


Figure 4. Endometrial tissue in the intestinal muscle layer

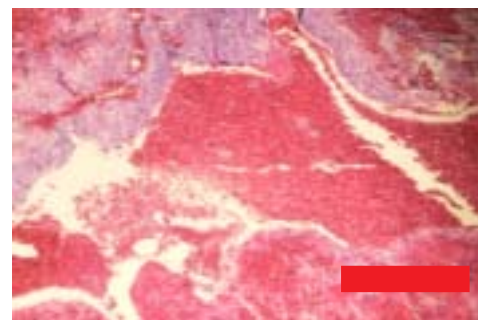


Figure 5. Ovarian brown cyst

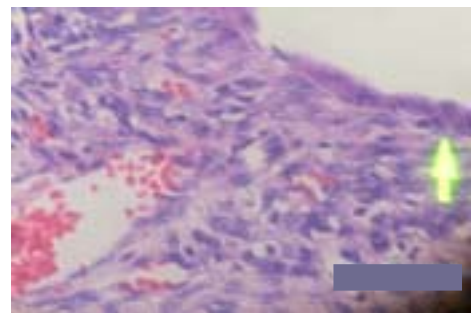


Figure 6. Epithelial lining in the ovarian cyst

## DISCUSSION

Bowel syndromes are extremely common in patients with endometriosis, but endometriosis patients who present with bowel syndrome may experience a long delay in getting a diagnosis. The severity of disease depends on the depth of endometrial tissue invasion into bowel wall.<sup>1</sup> The serosal or outer layer of the bowel often attach on the bowel wall. When endometriosis invades the bowel wall deeply, it causes a lot of scarring and retraction and can form a tumor which partially obstructs the bowel wall. When the disease is superficial, it usually causes no symptoms at all. Many of irritable bowel syndrome with spastic colon has endometriosis somewhere in their intestinal tracts.<sup>2</sup> Intestinal cramping and painful movements

occur in approximately 25% of patients, followed by constipation, diarrhea, alternating constipation and diarrhea, nausea and/or vomiting, abdominal pain, rectal pain, and rectal bleeding.<sup>2,3,4</sup> The true incidence of endometriosis causing bowel obstruction is unknown, although complete bowel obstruction is particularly rare in the cases of large bowel endometriosis.<sup>5</sup> Small intestinal endometriosis may produce vague symptoms such as abdominal pain and bloating. Involvement of the ileum frequently results in the development of small bowel obstruction.<sup>6,7</sup> Patients with endometriosis in muscularis propria are more likely to have obstructive symptoms resulting from adhesions, masses and strictures rather than symptoms suggestive of colitis. Serosal endometriosis may elicit a marked acute and chronic inflammatory infiltrate and an organizing serositis with adhesions.<sup>8</sup>

This patient suffered from diarrhea, constipation, bloating, and colicky pain, followed by nausea and vomiting. Her abdominal became distended and the pain became more severe due to intestinal obstruction. The symptom occurred just one week before the admission. There was history of dysmenorrhea without intestinal symptom in the menstrual cycle. Usually, endometriosis is not found directly in the bowel, and less than 10% cases demonstrate endometriosis directly on their bowel. Even when the endometriosis does not occur directly on the bowel, it can cause bowel symptoms. Inflammatory reaction can affect the bowel and contribute to them. Inflammatory mediators are released by tissues in response to inflammation or injury; these include prostaglandins, tumor necrosis factor (TNF), interleukins and cytokines. They create changes in the tissues and may cause new vessel growth, white blood cell reactions, tissue scarring. Prostaglandins, which are released from the endometriosis implants and uterus during menses, cause smooth muscle contractility, diarrhea and intestinal cramping.<sup>1</sup>

Gastrointestinal X-rays and colonoscopy are rarely useful as diagnostic methods for GI endometriosis since the disease usually doesn't penetrate all the way through the bowel, but it remains in the muscular wall of the bowel. Most patients will have negative GI workups, and GI endometriosis requires surgery for its diagnosis. Laparoscopy is an adequate diagnostic method for GI endometriosis and it also recognizes what GI disease can look like (most commonly white due to scarring of surrounding tissue). However, most of the gynecologists do not look at the intestines very closely; so many laparoscopies are useless for ruling out GI disease.<sup>2</sup>

The diagnosis of this patient was determined by pathology anatomical assessment after ileal partial

resection. The diagnosis of ovarian endometriosis was determined by the pathology anatomical assessment of endometrial cyst following the cystectomy. For treatment purpose, no drug treatment has ever been studied with respect to intestinal endometriosis. Drug treatment does not eradicate endometriosis of any stage or location and it is not approved by the FDA for treating infertility associated with endometriosis. The only indication for drug treatment in pelvis or GI endometriosis is to attempt or to achieve temporary pain relief when the patient must have delayed surgery. Surgery is the only way to eradicate GI endometriosis. It is rarely necessary to consider removal of the uterus, tube and ovaries to treat pelvic or GI endometriosis since removing those organs does not eradicate the disease.<sup>1,8,9</sup>

Malignancy may arise in any extra gonad site of endometriosis. Hyperestrogenism, either endogenous or exogenous, has been implicated as a risk factor for the development of cancer from endometriosis.<sup>10</sup> Endometriosis intestinal tumor has symptoms similar to those of intestinal adenocarcinoma, especially if the patient has been treated with hormone replacement therapy.<sup>11</sup>

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