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**Ileocecal endometriosis and a diagnosis dilemma: A case report and literature review**

Tong YL *et al*. Ileocecal endometriosis: A case report

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**Abstract**

Bowel endometriosis affects between 3.8% and 37% of women with endometriosis. The evaluation of symptoms and clinical examination are inadequate for an accurate diagnosis of intestinal endometriosis. We described a case of a 41-year-old woman who presented to our hospital for six month of recurrent abdominal pain, vomiting and diarrhea, without previous history of bowel disease. Physical examination revealed a palpable 3 cm × 5 cm mass in right lower quadrant abdomen. Laboratory tests showed slightly elevated levels of CA19-9 and CA125. Small bowel computer tomography scanning revealed an ileocecal mass with bowel wall thickening and luminal narrowing. Small bowel endoscopy identified a deep longitudinal ulcer and mucosal edema in distal ileum. All these findings supported the diagnosis of Crohn’s disease. The patient underwent a laparotomy, which identified 5 cm × 5 cm ileocecal mass with severe mucosal edema and luminal stricture in distal ileum. Histopathological examination confirmed a diagnosis of ileocecal endometriosis without other parts involved. After one-year follow-up, there was no recurrence of the symptoms.

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**Key words:** Ileus; Bowel obstruction; Longitudinal ulcer; Crohn’s disease; Endometriosis

**Core tip:** We described a case of a 41-year old woman who had recurrent abdominal pain, with vomiting and diarrhea to our hospital. The result of computer tomography scanning and Small bowel endoscopy were strongly suspected as Crohn’s disease. While the surgery and histopathological examination confirmed a diagnosis of ileocecal endometriosis without other parts involved.

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**INTRODUCTION**

Intestinal endometriosis affects 12%-15% of menstruating women, and is generally an asymptomatic condition[1]. Ileal involvement is very rare and the patients generally present with an asymptomatic or painful mass[2]. Symptoms of bowel endometriosis are numerous, ranging from asymptomatic to constellation of symptoms like painful bowel movements, cramps, constipation, diarrhea, vomiting, rectal pain, infertility, abdominal mass, increased urinary frequency and cyclical hematochezia[3]. Classically, the symptoms become worse during menses, but this is not always the case. This myriad of symptoms makes the condition difficult to diagnose. Small bowel endometriosis tends to affect bowel serosa and only 10% of intestinal cases had mucosal involvement[1,4,5]. It can be difficult to discern between ileal Crohn’s disease (CD) and endometriosis.

In this report, we describe a further case of ileocecal mass with longitudinal ulcer which was suspected as CD. The surgery and histopathological examination confirmed a diagnosis of ileocecal endometriosis with no parts involved. This report serves as a reminder of this rare condition as well as highlighting the diagnostic difficulties it can pose.

**CASE REPORT**

A 41-year-old lady with no significant past medical history was presented to our hospital for six month of recurrent abdominal pain, vomiting and diarrhea. The patient had no past history of tuberculosis and other infectious diseases. She denied radiation, poisonous chemical contact history and genetic history either. Her family had no history of bowel disease. Physical examination revealed a palpable 3 cm × 1.5 cm mass in right lower quadrant abdomen.

Laboratory tests showed slightly elevated levels of C-reactive protein, CA19-9 and CA125. No other abnormalities were found such as erythrocyte sedimentation rate, immune index or tuberculosis series check. Routine stool test was normal with occult blood negative.

Computer tomography (CT) scanning revealed an ileocecal mass with multiple mesenteric lymph node enlarged. A colonoscopy she underwent three months ago showed introverted mucosa surrounding the appendix hole without colon abnormalities. Small bowel endoscopy identified a deep longitudinal ulcer in distal ileum, mucosal edema and luminal stricture which the endoscopy couldn’t go through (Figure 1). All these findings supported the diagnosis of CD. To evaluate other intestinal lesions, we took the small bowel CT scanning, which revealed an ileocecal mass with bowel wall thickening and luminal narrowing, without other intestinal parts involved (Figure 2).

Due to the bowel obstruction, the patients underwent a laparotomy, which revealed an ileocecal mass, 5 cm ×5 cm in size, with severe mucosa edema and luminal stricture in distal ileum. No other organs were invaded. The frozen-section diagnosis was endometriosis. En bloc resection was taken and the histopathological examination confirmed ileocecal endometriosis. No subsequent medical treatment was taken. The patient recovered well after surgery, and has been promoted her life quality significantly. After one-year follow-up, there was no recurrence of the symptoms.

**DISCUSSION**

Endometriosis is defined as the presence of ectopic endometrial tissue in extrauterine sites. It affects 10%-15% women of reproductive age and usually becomes apparent in the reproductive years when the lesions are stimulated by ovarian hormones[6]. Intestinal endometriosis occurs in 12%-15% of cases, and the incidence of the involvement of different intestinal sites varies greatly in the literature, with the rectosigmoid colon, small bowel, appendix and cecum affected in 50%-90%, 2%-16%, 3%-18% and 2%-5% of cases respectively[4]. As in our case, ileocecal involvement is rare with an incidence of 4.1% in intestinal cases[7].

The etiology of endometriosis is still elusive. The most widely accepted theory is that the ‘’Retrograde menstruation’’ causing the implantation and growth of endometriosis on the serosal surface of extra-uterine organs or occurring secondary to metaplasia in the pelvic peritoneum[2,8-10].

Symptoms of bowel endometriosis can be associated with the patients’ menstrual cycle in 18%-40% of cases but may become permanent when the lesions progress[2,11,12]. Under cyclical hormonal influences, serosal implants may proliferate and infiltrate the bowel wall, and lead to inflammation, fibrosis, and metaplasia or hyperplasia of intestinal smooth muscles that can involve serosa, submucosa and uncommonly mucosa[13]. This point leads to introverted mucosa introverted surrounding the appendix hole, luminal stricture, longitudinal ulcer, and ileocecal mass as we believe in our case.

Symptoms range from asymptomatic to constellation of symptoms like painful bowel movements, cramps, constipation, diarrhea, vomiting, rectal pain, infertility, abdominal mass, increased urinary frequency and cyclical hematochezia[3]. Those symptoms can mimic a wide spectrum of diseases, including irritable bowel syndrome, infectious diseases, ischemic enteritis/colitis, inflammatory bowel disease and neoplasm, so it is difficult to establish a preoperative diagnosis of bowel endometriosis[2 14,15].

Laboratory tests such as CA125 are not sensitive enough for diagnosis[9]. Transvaginal sonography, should be used as the first-line diagnostic technique, which shown a sensitivity and specificity of 43.7% and 50%, respectively[16,17]. Saline contrast sonovaginography were more accurate in diagnosing, than did transvaginal ultrasonography, with a sensitivity and specificity of 90.6% and 85.7%, respectively[16-18]. Contrast CT with enteroclysis protocols can be useful in diagnosis as it may demonstrate focal or constricting bowel lesions[4,9]. Magnetic resonance imaging (MRI) is currently the best imaging modality for enteric endometriosis with a sensitivity of 77%-93%[1,9]. Endoscopy may have no valuable results because of the intact mucosa but it is still recommended in all patients with suspected endometriosis to rule out mucosal involvement and malignant lesions with help of biopsies, if needed. In our patient, symptoms relapsed irregularly and were not related with menses. Its imaging result shows ileocecal mass and longitudinal ulcer with luminal stricture under endoscopy, which strongly suggested CD. Due to the bowel obstruction, surgery was recommended.

Histopathological confirmation required presence of both glandular and stromal tissue. In our patient, the pathologist findings showed the annular lesion of endometriosis and mucosa was not involved.

The treatment of uncomplicated intestinal endometriosis depends on the patient’s age and intention to conceive. Medical treatment with hormonal therapy such as oral contraceptive pill, Danazol or Gonatrophin antagonists can be attempted for intestinal disease when there is no obstruction[1,2,19]. Bowel resection is indicated if there are symptoms of obstruction or bleeding, and if malignancy cannot be excluded. Post-operative hormonal therapy dose not demonstrate benefits according to recent meta-analysis[20].

In summary, bowel endometriosis should be borne in mind when women of reproductive age who present with episodic gastrointestinal symptoms. A careful history may elicit symptoms related to the patients’ menses. Small bowel CT and MRI is indicated, and endoscopy is still recommended in all patients to rule out mucosal involvement and malignant lesions. In our case, final diagnosis could only be given by the pathologist report. Multidisciplinary care should be encouraged to ensure correct evaluation and improve the management of these patients.

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**Figure 1 Enteroscopic findings of the patient.** A: Mucosa edema of the distal ileum; B: A deep longitudinal ulcer and luminal stricture in distal ileum; C: Multiple ulcers, mucosa edema in distal ileum.

**Figure 2 Small bowel computer tomography scan of the patient.** Ileocecal bowel wall thickened which were as ball and luminal narrowing with proximal lumen expansion. Contrast enhancement pattern showed markedly enhancement. No other intestinal parts involved.