Ileocecal endometriosis mimicking Crohn’s disease and causing acute small bowel obstruction: A case report and review of literature

Jad Jamal Terro, Kassem Mohammad Jammoul, Rayan Said Lakkis, Mohammad Ahmad Al Raishouni, Mostapha Mneimneh, Houssam Khodor Abtar

ABSTRACT

Introduction: Endometriosis, defined as the growth of extratunical endometrial tissue, is a chronic gynecologic pathology affecting reproductive-age women. Bowel endometriosis occurs in the rectosigmoid region and uncommonly in the ileocecal area. Case Report: Herein, we report a case of a 35-year-old Crohn’s disease virgin female patient complaining of both cyclic and noncyclic chronic diffuse abdominal pain for several months, presenting with a picture of small bowel obstruction. Computed tomography scan showed distended small bowel loops, multiple air-fluid levels, and fat stranding in the ileocecal region. Exploratory laparotomy revealed a 2–3 cm ileocecal mass causing adhesions and small bowel obstruction. Right hemicolectomy with primary side-to-side ileocolic anastomosis performed. Histology came with bowel endometriosis invading the submucosa of the ileum and muscularis propria of the cecum. Conclusion: Ileocecal endometriosis is a great diagnostic challenge for medical professionals for its mimicry to many pathologies in this region. Preoperative diagnosis is being more precise with time as the use of magnetic resonance imaging enterography. More studies must be carried on about the guidelines of surgical treatment and techniques of ileocecal endometriosis and its outcomes.

Keywords: Diagnostic challenge, Ileocecal endometriosis, Small bowel obstruction

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INTRODUCTION

Endometriosis is known as a longstanding gynecologic abnormality affecting 10% of nulliparous females belonging to 25–45 age group [1, 2]. It is defined by the growth of normal endometrial tissue outside the uterus. Many hypotheses are thought to be lying behind this complex disease but none of them has been well established [3]. There are three different types of endometriosis: (1) Ovarian, (2) superficial (peritoneal), and (3) deep infiltrating [4]. Bowel endometriosis is the most common subtype of deep infiltrating, touching the rectosigmoid area in 50–90% of cases, less commonly the small intestine and the appendix, and rarely the
terminal ileum, cecum, and other parts of the colon [1, 5]. Its clinical picture masquerades various bowel pathologies such as Crohn’s disease (CD). It presents with numerous nonspecific symptoms depending on its anatomical site, mostly as a diffuse noncyclic chronic abdominal pain, dysmenorrhea, and changes in bowel movement. Ileal involvement signs are intermittent abdominal cramps, nausea/vomiting, constipation, and abdominal distention. Terminal ileum endometriosis is an uncommon cause of small bowel obstruction [1, 6]. Transvaginal ultrasound (US) and magnetic resonance imaging (MRI) of the abdomen and pelvis have an excellent preoperative diagnostic ability in stable patients, who can benefit from medical treatment, but surgery remains the mainstay treatment and diagnosis in unstable patients [4]. We report a case of ileocecal endometriosis leading to small bowel obstruction with an initial postulated diagnosis of irritable bowel syndrome and CD due to longstanding nonspecific intermittent chronic noncyclic abdominal pain in a nulliparous virgin female patient.

CASE REPORT

This is a 35-year-old virgin female known for CD, maintained on corticosteroids, azathioprine, and infliximab. She has a positive family history of CD as well as negative past surgical history. The patient complained of repeated episodes of diffuse colicky abdominal pain not related to her normal menstrual cycles, altered bowel habits, nausea, and vomiting over the last nine months. She was diagnosed at first to have irritable bowel syndrome (IBS) and started on Bevacol with no improvement. Computed tomography (CT) scan of the abdomen and pelvis showed small bowel distension and thickened terminal ileum. Colonoscopy with multiple biopsies from terminal ileum confirmed the diagnosis of active CD. She presented finally to the emergency department suffering from severe diffuse colicky abdominal pain, associated with abdominal distention, constipation/obstipation, and nausea/vomiting. She did not state any fever/chills, weight loss, or other symptoms. Her labs showed no leukocytosis, anemia, or electrolyte derangements. She was admitted to the regular floor for conservative management. Computed tomography scan of the abdomen and pelvis revealed multiple distended small bowel loops, air-fluid levels, and fat stranding on the ileocecal region (Figure 1). Exploratory laparotomy showed dilated ileal and jejunal loops. Multiple hard obstructing lesions of 1–3 cm discovered at the ileocecal region (Figure 2), causing small bowel adhesions (Figure 3). A right hemicolectomy was done, for the lack of frozen section, with healthy ends side to side ileocolic anastomosis. A drain was inserted in Douglas, and closure of the abdominal wall was done layer by layer. Pathology result came back with submucosal and intramuscular endometriosis at the terminal ileum as well as in the cecum reaching the muscularis propria, with normal appendix. The patient had a smooth postoperative course. She was referred to her gynecologist for further

Figure 1: CT scan of abdomen and pelvis with contrast showing severe small bowel dilation with multiple air-fluid levels (white arrow) as well as fat stranding at the ileocecal region (yellow arrow).

Figure 2: Multiple small lesions at the terminal Ileum (black arrow).
decisions and treatment.

DISCUSSION

Endometriosis can affect 15% of fertile and up to 50% of infertile females. It is described as the implantation of benign endometrial tissue in extrauterine sites [3]. Ninety percent of third- and fourth-decade aged females suffering from chronic pelvic pain have endometriosis. A first-degree relative increases the risk by 10 folds in the else family female members [7]. Endometriosis can be subdivided into two categories: (1) intraperitoneal endometriosis, touching mostly the ovaries, fallopian tubes, and Douglas pouch, and uncommonly affecting the gastrointestinal system; and (2) extraperitoneal endometriosis affects the vagina, inguinal hernia sac, and surgical incisions. It rarely affects the urinary system, lungs, and nervous system. Many hypotheses are postulated to know the pathophysiology enigma of endometriosis, such as extrauterine growth of endometrial tissue, cell migration through the circulatory system, migration through nerves, and retrograde menstruation hypothesis, with the latter being the most accepted [8]. Deep infiltrating endometrial nodules have at least 5 mm thickness invasion through the pelvic organs mostly affecting the bowels (3–37%): 50–90% at rectosigmoid, 3–18% at the appendix, and rarely at cecum and ileum [9, 10].

Bowel endometriosis is known for its diagnostic challenge. Having a precise patient history is the first cornerstone of the diagnostic approach. Chronic abdominal pain is noncyclic in 50% of cases due to loss of hormonal synchrony of endometriosis with the uterine tissue because of the distance [1, 3]. Ileal endometriosis commonly has signs of sub-obstruction that ends with true total obstruction if misdiagnosed as other bowel pathologies, such as IBS, CD, infectious ileitis, and malignancy [4, 5].

Imaging is an indispensable tool for preoperative planning and diagnosis. Transvaginal US and MRI have good results in diagnosing endometriosis at the rectosigmoid area, but have limited value in evaluating the ileocecal region [7]. Here comes the promising role of the 3.0 T MRI enterography that can widely detect the ileocecal region endometriosis preoperatively. Computed tomography enterography has a limited role, where it can only assess the presence of the small bowel obstruction as well as the transition zone [11].

Colonoscopy is indicated in cases of hematochezia and to rule out other pathologies, but it has limited value in diagnosis since mucosa has rapid healing [9].

Surgery remains the mainstay definitive therapeutic and diagnostic method. There is no clear data about the indications of surgical excision in treating the non-obstructing ileal endometriosis. Resection is recommended because of the risk of obstruction [1]. Running the bowels is an essential step during exploration since bowel endometriosis showed multifocal involvement in >50% of cases. Surgical treatment ranges from shaving to segmental resection depending on the invasion. It should be coupled with frozen sections for more accurate diagnosis and in ruling out malignancy. The histologic exam is the confirmatory mean of surgery [1, 4].

CONCLUSION

Bowel endometriosis, especially around the ileocecal region, is indisputably a challenging diagnosis that necessitates a multidisciplinary team. Surgery is the gold standard for diagnosis and treatment. Histology result made our case unique and came with infiltrating endometriosis invading the muscularis propria in cecum and submucosa in the terminal ileum.

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Author Contributions

Jad Jamal Terro – Conception of the work, Acquisition of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Kassem Mohammad Jammoul – Design of the work, Acquisition of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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