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TERMINAL ILEAL ENDOMETRIOSIS MASQUERADING AS CROHN'S DISEASE: A RARE CAUSE OF SMALL BOWEL OBSTRUCTION AND PERFORATION IN A MIDDLE-AGED WOMAN

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ABSTRACT

Endometriosis is a chronic inflammatory condition affecting 5–10% of women of reproductive age, most commonly involving pelvic organs. Gastrointestinal endometriosis, particularly at the terminal ileum, is rare and can clinically mimic other conditions such as Crohn's disease, posing significant diagnostic challenges. We report the case of a 45-year-old woman with no prior medical or gynecologic history who presented with a 1-week history of nausea, vomiting, abdominal pain, and obstipation. Imaging studies revealed terminal ileal lesions, and colonoscopy identified a large obstructive polypoid lesion 4 cm proximal to the ileocecal valve. She underwent laparoscopic ileocolic resection, which revealed an obstructed and perforated terminal ileum. Histopathological analysis demonstrated florid granulation tissue, subserosal fibrosis, and a purulent exudate, with endometriotic inclusions comprising endometrial glands and stroma in the terminal ileum and appendix. The ileal and colonic mucosa were unremarkable, and no reactive lymphadenopathy was found. A final diagnosis of ileal endometriosis was made. Postoperatively, the patient recovered well, required no additional medical therapy, and experienced a significant improvement in symptoms without recurrence.

This case highlights an unusual presentation of terminal ileal endometriosis causing small bowel obstruction and perforation, masquerading as Crohn's disease. The absence of typical gynecologic symptoms or mucosal abnormalities underscores the diagnostic complexity. Recognition of this rare entity is crucial, as timely surgical intervention can be curative and significantly enhance patient outcomes. This case reinforces the importance of maintaining a broad differential diagnosis in women presenting with unexplained gastrointestinal symptoms and ileal lesions.

KEYWORDS

Ileal endometriosis, small bowel obstruction, Crohn's disease mimic

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LEARNING POINTS

- This case underscores the rare and deceptive presentation of ileal endometriosis mimicking Crohn's disease, culminating in small bowel obstruction and perforation in a patient without any prior history or gynecologic symptoms.
- What sets this case apart is the presence of both ileal and appendiceal endometriotic inclusions, in the absence of typical mucosal involvement or prior diagnosis of endometriosis.
- The diagnosis was only confirmed postoperatively through histopathology, reinforcing the importance of considering endometriosis in the differential diagnosis of terminal ileal lesions—even in patients beyond peak reproductive years and with no classic symptoms.

INTRODUCTION

Endometriosis is a common chronic inflammatory disease affecting 5-10% of women of reproductive age. The average of diagnosis is 28 years. This painful condition is characterized by a peak incidence in the third and fourth decade of life, and is characterized by the growth of the endometrial glands and stroma outside the uterus. It affects the ovaries, fallopian tubes, and the tissue lining the pelvis. This gynecological disease can be associated with debilitating pain and reduce the quality of life. Dysmenorrhea, chronic pelvic pain, dyspareunia and infertility are some of the symptoms of endometriosis and can cause significant morbidity. Sometimes endometriosis can be misdiagnosed as Crohn's disease based on clinical signs and symptoms like chronic pelvis and abdominal pain, and diarrhea and can also lead to small bowel obstruction particularly at the level of the terminal ileum which is a common manifestation of Crohn's disease and often requires surgical resection[1,2]. We present a case of a 45-year-old female who presented with a week-long history of nausea, vomiting, abdominal pain, and obstipation. Imaging revealed terminal ileal lesions, and colonoscopy showed a large obstructive polypoid lesion near the ileocecal valve. She underwent laparoscopic ileocolic resection, which revealed an ileal obstruction with perforation. Histopathology showed florid granulation tissue, purulent exudate, and endometriotic inclusions in the ileum and appendix. No mucosal abnormalities or reactive lymph nodes were found. The final diagnosis was terminal ileal endometriosis. The patient recovered well postoperatively without further treatment, experiencing significant symptom relief and no recurrence.

CASE PRESENTATION

A 45 years old female was admitted for nausea, vomiting, abdominal pain and obstipation of 1-week duration. She had no previous medical history. At the time of the presentation, physical examination showed diffused abdominal distention while computed tomography scan revealed terminal ileal lesions *(Fig. 1)*. The patient was then submitted for endoscopy, while colonoscopy revealed large obstructed polypoid lesion at 4 cm from the ileocecal valve; esophagogastroduodenoscopy showed no abnormalities. These lesions required further surgical investigation. The patient underwent laparoscopic Ileo-colic resection of the affected site which showed an obstruction at the terminal ileum *(Fig. 2)*. The frozen section was then sent for histopathological investigation. Gross interpretations showed the presence of an ileal perforation with the serosa covered by pseudomembranes. Microscopically, the perforation site was marked by florid granulation tissue. The subserosa was thick, fibro-edematous and expanded by a polymorphic leukocytic population with a purulent exudate found at the outer aspect. Proximal to the perforation site, there were endometriotic inclusions made up of glands and stroma. The ileal and colonic mucosa were unremarkable. The appendiceal lumen was obliterated by fibrous tissue and contains inclusions of endometrial glands and stroma. No reactive lymph nodes were found. The final diagnosis was endometriosis at the level of the terminal ileum and the appendix. After the surgery, the patient recovered well with no additional medical management, with a significant improvement in her quality of life and no recurrence of symptoms.

DISCUSSION

Not all lesions of the small bowel are caused by Crohn's disease. Several lesions of the small bowel can be misdiagnosed as Crohn's including per-appendiceal abscess, tubo-ovarian disease, primary small bowel neoplasms like adenocarcinoma, lymphoma and carcinoid tumors, metastatic tumors, drug-induced injury, infections like tuberculosis and Yersinia ileitis, vascular disease like ischemic colitis and arteritis affecting small vessels of the small bowel, and inflammatory disorders for instance Behçet's disease, that can be very hard to distinguish from Crohn's disease particularly at the ileocecal area. Our main focus is on infiltrative diseases particularly endometriosis at the terminal ileum which can present with signs and symptoms similar to those of Crohn's disease and can cause small bowel obstruction and ileocecal intussusception often requiring surgical resection[2].

Stenosis of the terminal ileum is an important sign of endometriosis at this anatomical location. Körber et al.[3], reported the case of a 25-year-old woman who presented with chronic abdominal pain, diarrhea, nausea, vomiting, and weight loss. Imaging and endoscopy revealed a stenosis in the terminal ileum, initially suspected to be Crohn's disease. Partial ileal resection showed a thickened bowel without

inflammation. Histology revealed chronic inflammation, hemorrhages, ulcers, and extensive endometriosis in the subserosa and muscularis propria, confirming intestinal endometriosis as the underlying cause[3].

Small bowel obstruction at the level of the terminal ileum can occur as a result of endometriosis which can be misdiagnosed as Crohn's disease due to overlapping symptoms and gross anatomical findings. Lu et al.[4], described a 37-year-old woman with a history of severe endometriosis and autoimmune conditions who presented with a month-long history of crampy abdominal pain, nausea, vomiting, weight loss, and partial bowel obstruction. Imaging showed distal ileal thickening suggestive of Crohn's disease, supported by elevated fecal calprotectin. Despite medical therapy with steroids, azathioprine, and infliximab, the symptoms persisted, prompting ileo-colic resection. Histology revealed multifocal transmural ileal endometriosis with subserosal fibrosis and Crohn's-like mucosal fissuring. Endometrial glands were also found in a lymph node. The diagnosis was initially missed on laparoscopy due to the disease's rare presentation and lack of visible serosal involvement[4]. Dong et al.[5], reported the case of a 45-year-old woman who presented with subacute small bowel obstruction and was initially treated for suspected ileocecal Crohn's disease. After medical therapy and failed terminal ileal intubation on colonoscopy, she re-presented with complete obstruction. Surgery revealed a terminal ileal stricture, and histopathology confirmed endometriosis with no Crohn's disease. Steroids and azathioprine were stopped[5]. Furthermore, Tong et al.[6] described a 41-year-old woman presented with 6 months of recurrent abdominal pain, vomiting, and diarrhea. Imaging and endoscopy revealed an ileocecal mass with mucosal edema, stricture, and a deep ileal ulcer. Elevated CA19-9, CA125, and C-reactive protein raised suspicion for Crohn's disease. However, due to bowel obstruction, she underwent laparotomy revealing a 5×5 cm ileocecal mass. Frozen section and histopathology confirmed endometriosis. En bloc resection was performed with no further treatment required[6]. In addition, Boulton et al.[7] reported the cases of two women, 31 and 19 years-old that had similar symptoms of abdominal discomfort lastingseveral months but the 19-year-old was initially diagnosed with Crohn's disease confirmed on histology. At the time of presentation to the hospital both were found to have small bowel obstruction at the level of the terminal ileum requiring surgical resection which revealed endometriosis, not Crohn's disease[7]. Similar cases of endometriosis-induced small bowel obstruction at the terminal ileum were also described by others[8-12].

We described a very rare case of ileal and appendiceal endometriosis mimicking Crohn's disease in a middle-aged woman with no previous history of gynecological diseases. The ptient initially presented with abdominal pain, vomiting and obstipation typical of small bowel obstruction. Further investigation by computed tomography scan and colonoscopy showed obstructive lesions at the level of the ileocecal valve. Surgical resection of the affected site

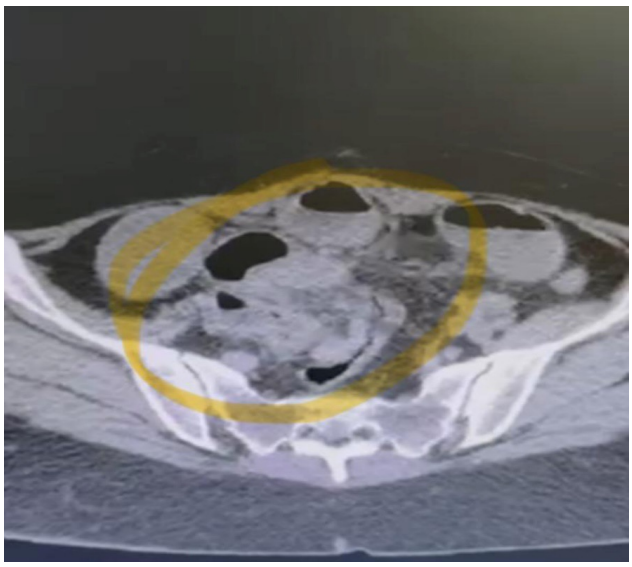


Figure 1. A computed tomography scan revealed terminal ileal lesions.

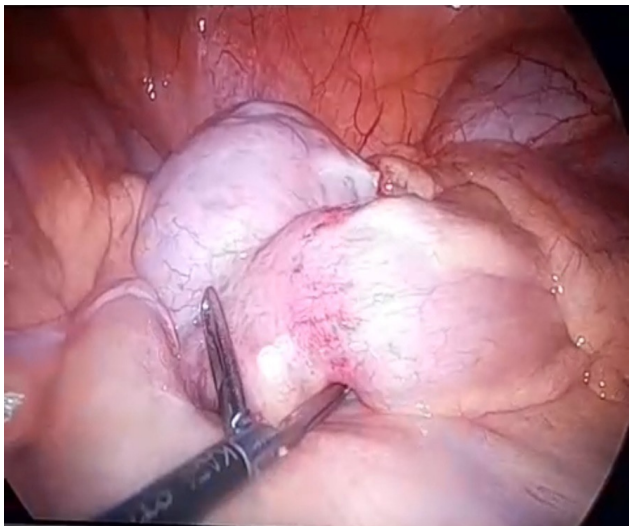


Figure 2. Laparoscopic investigation showing an obstruction at the terminal ileum.

was done leading to a final diagnosis of endometriosis of ileum and appendix. This case illustrates the profound diagnostic overlap between Crohn's disease and intestinal endometriosis, particularly when the latter presents at the terminal ileum. Although both conditions can cause chronic abdominal pain, diarrhea, weight loss, and even small bowel obstruction, the long-term management strategies for the two disorders differ. Crohn's disease is a chronic relapsing inflammatory bowel disease requiring medical therapy such as corticosteroids, immunomodulators, and biologics to suppress inflammation and prevent recurrence. In contrast, in isolated bowel endometriosis surgical resection is often curative and further medical therapy is usually not required unless there is pelvic involvement or recurrence. Our patient presented with obstructive symptoms necessitating surgical intervention regardless of the underlying etiology. Thus, even if the diagnosis of endometriosis had been established preoperatively, the immediate management (laparoscopic ileocolic resection) would likely have remained unchanged. However, preoperative identification of endometriosis could

have influenced intraoperative planning and prompted earlier involvement of a gynecologic team, particularly in the context of suspected multifocal disease. Furthermore, while in our case histological confirmation of endometriosis was retrospective, including this entity as part of the differential diagnosis is important. First, it prevents unnecessary long-term immunosuppression typically used for Crohn's disease. Second, it prompts a more tailored postoperative plan including consideration of hormonal therapy or gynecologic consultation when appropriate. We underscore the need for vigilance during follow-up, particularly in women with unexplained gastrointestinal symptoms, even in the absence of classic pelvic pain or known gynecologic history. Therefore, while the acute surgical indication in our case would have remained unchanged, acknowledging endometriosis as a potential mimic of Crohn's disease remains crucial. It ensures more accurate diagnosis, avoids mismanagement, and optimizes long-term care.

CONCLUSION

This case underscores the rare and deceptive presentation of ileal endometriosis mimicking Crohn's disease, culminating in small bowel obstruction and perforation in a patient without any prior history or gynecologic symptoms. What sets this case apart is the presence of both ileal and appendiceal endometriotic inclusions, in the absence of typical mucosal involvement or a prior diagnosis of endometriosis. The diagnosis was only confirmed postoperatively through histopathology, which underscores the importance of considering endometriosis in the differential diagnosis of terminal ileal lesions,even in patients beyond peak reproductive years and with no classic symptoms. Early surgical intervention proved curative and significantly improved quality of life.

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