CASE REPORT

Small bowel obstruction secondary to endometriosis in a 30-year-old nulliparous woman managed at a level-5 private hospital in Nairobi, Kenya

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Abstract

Endometriosis is characterized by the presence of endometrial tissue outside the uterus and is commonly seen in young women. Intestinal obstruction from endometriosis is rare. We present the case of a 30-year-old nulliparous woman who presented with generalized abdominal pain and vomiting. She was diagnosed with ileocaecal and appendiceal obstruction caused by a mass. A right hemicolectomy with ileocolic anastomosis was successfully performed. Histopathological examination confirmed endometrial tissue in the appendix and ileocaecal wall. Endometriosis should be considered as a cause of bowel obstruction in premenopausal women. The management of intestinal endometriosis consists of hormonal therapy in uncomplicated cases and surgery in cases associated with bowel obstruction.

Keywords: endometriosis, intestinal obstruction, nulliparity, Kenya

Introduction

Endometriosis is defined by the presence of functional endometrial tissue consisting of glands and stroma outside the uterus.[1] Although statistics vary, the prevalence is estimated to be about 10% to 15%.[2] The incidence peaks around the third and fourth decades. Its cause is unknown; however, positive family history and nulliparity have been identified as risk factors.[3]

Endometriosis can be classified into intraperitoneal and extraperitoneal sites. The rectosigmoid area is involved in about 70% of cases and is the most commonly affected region of the gut.[4] Ileal involvement and obstruction due to this pathology are rare.[1]

The symptoms of bowel endometriosis include abdominal pain, rectal pain, tenesmus, rectal bleeding, constipation, and even intestinal obstruction. Classically, the symptoms are worst during menses, but this is not always the case.[3]

Case presentation

We report the case of a 30-year-old nulliparous woman who presented to the emergency room with a protracted history of abdominal complaints. She had been unwell for 3 months, experiencing severe (and progressively worsening) cramping abdominal pain in the right lower quadrant, fever, and nausea. At the time of presentation, the abdominal pain had become generalized. It was nonradiating, colicky, and worsened with her menses. She had marked postprandial bilious vomiting and had lost 12 kg over a 3-month period. She reported altered bowel habits, with episodes of diarrhoea followed by constipation and mucoid stools.

Her past medical and surgical history was unremarkable. She was a nonsmoker and social drinker, and she had no significant family history. She experienced menarche at the age of 14. Typically, her menstrual cycles were every 21 days, with the periods themselves being painful, heavy, and lasting about 7 days.

On examination, she was comfortable at rest, afebrile, and normotensive, with a pulse rate of 113 beats per minute. She had a mildly distended abdomen with generalized tenderness on palpation without rigidity, guarding, or rebound tenderness. Auscultation revealed tinkling bowel sounds, and the digital rectal examination was unremarkable.

Laboratory tests were normal except for her serum potassium level, which was 3.05 mmol/L, indicative of hypokalaemia.

Supine and erect abdominal x-rays showed dilated bowel loops with multiple air–fluid levels. Contrast-enhanced abdominal computed tomography revealed dilated small bowel loops, with multiple air–fluid levels and a transition point at

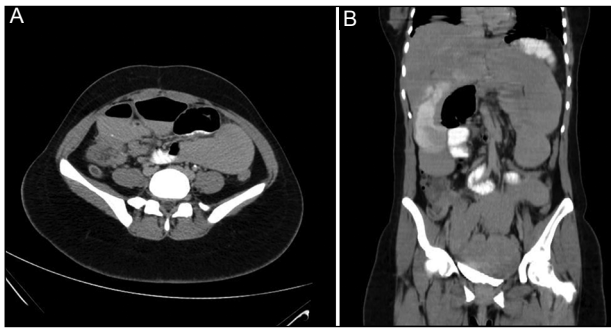

Figure 1. Abdominal computed tomography revealed dilated small bowel loops with multiple air–fluid levels and a transition point (red arrow) at the ileocecal junction

Figure 2. Abdominal computed tomography revealed a thickened appendix (blue arrows)

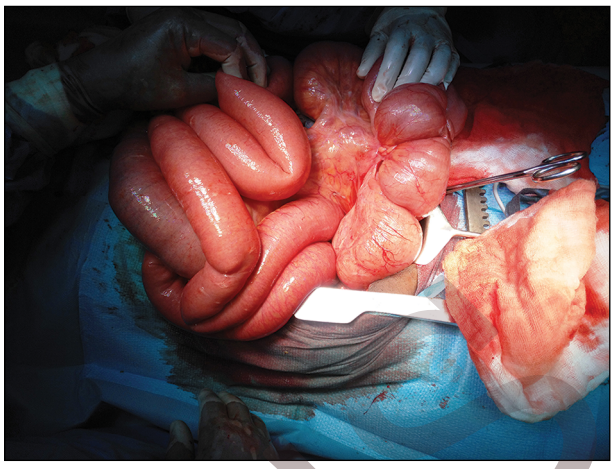

Figure 3. Intraoperative photograph of grossly distended small bowel (red arrow) with adhesions forming a mass (blue arrow), including the terminal ileum, cecum, and appendix

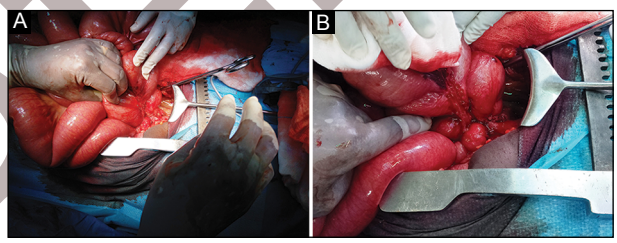

Figure 4. Intraoperative photographs showing dark nodular lesions over the bowel wall (blue arrows)

the ileocaecal junction (Figure 1), along with a thickened appendix measuring 9.7 mm in diameter (Figure 2).

She was managed with intravenous fluids and prophylactic antibiotics. After obtaining written informed consent, we performed an emergency extended midline exploratory laparotomy.

The intraoperative findings included a grossly distended small bowel from the middle of the jejunum, with a transitional point at the terminal jejunum; tight, dense adhesions forming a mass including the terminal ileum, caecum (Figure 3), and a distended but intact appendix extending to the right fallopian tube; a nodular-appearing right ovary; numerous dark mesenteric nodules over the entire peritoneal lining with similar nodules noted within the pelvis, pouch of Douglas, and bowel wall (Figure 4); and a collapsed ascending and transverse colon. A right hemicolectomy was performed with a side-to-side ileotransverse anastomosis.

Macroscopic evaluation of the intraoperative samples confirmed a 30-cm specimen containing the terminal ileum, appendix, caecum, and ascending colon, and upon dissection, there was a 3-cm caecal fibrotic lesion and nodular lesions noted on the mesentery. Microscopy revealed multiple foci of endometrial glands and stroma within the smooth muscle of the muscularis propria, and fibrous adhesions were noted on the serosal surface of the large bowel.

Postoperatively, she had an uneventful recovery and was discharged. Gynaecological input was sought for further management, and she was commenced on danazol.

Discussion

This 30-year-old nulliparous woman presented with a protracted history of digestive symptoms. Besides age, other risk factors that have been identified include early menarche, short menstrual cycles, and tall stature.[5]

Patients commonly present with infertility or refractory pelvic pain. Owing to the influence of hormonal changes, symptoms of endometriosis often peak during the menstrual cycle.[6] When there is intestinal involvement, as seen with this patient, preoperative diagnosis is challenging because symptoms tend to overlap with other medical conditions, and imaging results can be nonspecific.

The cause of endometriosis remains unclear. However, several theories have been proposed to explain this condition.

Sampson's retrograde menstruation theory suggests that during menstruation, endometrial tissue refluxes through the fallopian tubes and implants on the serosal surfaces of abdominal and pelvic organs.[7] Alternatively, Minh's theory suggests metaplastic transformation of pluripotential peritoneal mesothelium as a possible mechanism for the extragenital growth of endometrial tissue.[8]

Intestinal obstruction caused by endometriosis is rare.[9] Isolated involvement of the ileum has been estimated to occur in 1% to 7% of cases. Dual involvement of the terminal ileum and appendix, as seen in this patient, occurs infrequently.[10]

Management of intestinal endometriosis includes hormonal therapy and surgery. The former, using danazol or gonadotrophin-releasing hormone analogues, may be used in uncomplicated cases. Bowel resection is the treatment of choice for complicated and unresolved cases.[10]

Conclusion

Endometriosis should be considered as a cause of bowel obstruction in women of reproductive age.

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