CASE REPORT

Endometriosis masquerading as Crohn's disease in a patient with acute small bowel obstruction

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SUMMARY

A 45-year-old woman, a smoker, presented acutely with subacute small bowel obstruction. Abdominal CT scan showed features of ileocaecal Crohn's disease. She was treated with high dose steroids and her symptoms rapidly settled. A few days later she was discharged on a reducing steroid course in addition to azathioprine. Outpatient colonoscopy was performed and reported as normal but there was failed terminal ileal intubation. Three months later, she represented as an emergency with complete small bowel obstruction. On laparoscopy, a terminal ileal stricture was found resulting in an ileocolic resection. Histopathology reported an endometriotic stricture with no evidence of Crohn's disease. She was advised to stop steroids and azathioprine. A subsequent pelvic MRI scan showed no further endometrial deposits and she remained symptom free. This case highlights that endometriosis should always be considered when women of childbearing age present with bowel obstruction, even if the patient has no other evidence of the disease.

BACKGROUND

The reported incidence of bowel endometriosis varies from 3% to 34% of women with pelvic endometriosis.¹ There is a strong association with pelvic endometriosis. However, reports of bowel endometriosis independent from pelvic disease exist.² Endometriosis may affect any portion of the gastrointestinal tract and can present with multiple sites of involvement in either a single lesion with small satellite lesions surrounding or as isolated nodules. Ileal and caecal involvement are rare.³ Symptoms are usually non-specific and mimic other pathologies such as Crohn's, diverticulitis, or malignancy. Most imaging modalities have proven to be of limited value in the diagnosis as they lack adequate resolution to detect smaller superficial implants or adhesions; preoperative imaging studies will, by definition, be primarily useful in the case of larger lesions with mass effect.⁴ This case is important to highlight the diagnostic difficulty of this condition and the importance of considering differential diagnoses when no definitive histology is available.

CASE PRESENTATION

A 45-year-old woman, usually fit and well with no relevant past medical history, was admitted out-of-hours to the emergency department with a 3-day history of profuse vomiting and absolute constipation. She had a 6-month history of upper abdominal pain, spasmodic in nature, with episodes

lasting 10–15 s and no identifiable triggering factors. She was a smoker and had no significant family history. Examination findings and blood tests were unremarkable. However, abdominal plain X-ray showed dilated loops of bowel in keeping with small bowel obstruction. Abdominal CT described abnormal wall thickening affecting the caecum and ascending colon with similar changes affecting the terminal ileum, over a segment of around 10 cm, together with distended ileum more proximally although normal calibre of the stomach and proximal jejunum. The CT concluded that these features were suggestive of inflammatory bowel disease, mostly in keeping with Crohn's disease. Faecal calprotectin was significantly elevated at 262 µg/g (normal <50 µg/g).

The patient was reviewed by the gastroenterology team and started on high dose steroids. Her symptoms settled without the need for surgical intervention and she was discharged with outpatient follow-up. An outpatient colonoscopy was reported as normal albeit failing to enter the terminal ileum. Random colonic biopsies obtained were normal and she was put on a reducing regime of steroids. Her response to steroids alongside an elevated faecal calprotectin was taken to be strong evidence for an inflammatory Crohn's stricture.

Three months later, she was readmitted to hospital with small bowel obstruction. On this occasion, her worsening symptoms resulted in an emergency laparoscopic right hemicolectomy where she was found to have small bowel obstruction due to a terminal ileal stricture. She had an uncomplicated recovery.

She remained symptom free and was started on azathioprine prior to discharge. Histopathology analysis came back 1 week later reporting that the ileal stricture revealed dense fibrosis and almost complete luminal obliteration; sections from the ileal stricture show deposits of endometriosis within hyperplastic muscularis propria and sections taken from the area of ileal mucosal irregularity again show deposits of endometriosis within muscularis propria and normal overlying mucosa and no features of Crohn's disease.

INVESTIGATIONS

On admission, the patient's blood tests revealed a white cell count $7.4 \times 10^9/L$, haemoglobin 157 g/L, mean cell volume 35.0 pg, platelets $334 \times 10^9/L$, neutrophil count $5.8 \times 10^9/L$, CRP 10 mg/L, urea 4.5 mmol/L, creatinine 45 µmol/L, albumin 40 g/L, calprotectin 262 µg/g, bilirubin 10 µmol/L, alanine aminotransferase 19 µ/L, alkaline phosphatase 114 µ/L and γ-glutamyl transferase 70 µ/L.

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The patient's abdominal X-ray on admission was reported to show multiple dilated small bowel loops in keeping with small bowel obstruction (figure 1). Her abdominal CT reported small bowel obstruction with abnormal wall thickening affecting the caecum and a 10 cm segment of terminal ileum and concluded that these appearances were suggestive of inflammatory bowel disease with Crohn's being the most likely pathology (figure 2).

Her colonoscopy report showed no obvious abnormality but the terminal ileum was not entered. Random colonic biopsies revealed normal large intestinal mucosa within histological limits.

DIFFERENTIAL DIAGNOSIS

The causes of small bowel obstruction in a 45-year-old woman with no history of surgery would include primary or secondary malignancy, inflammatory bowel disease, infectious processes such as diverticulitis, appendicitis, or intra-abdominal abscess, incarcerated hernias, or congenital adhesions.

OUTCOME AND FOLLOW-UP

As soon as the histology report was made available, the patient was contacted, and advised to stop the azathioprine and steroids. A pelvic MRI showed no further significant endometrioma, deep pelvic endometriosis or bowel involvement. A referral to the gynaecology team was made and a watchful wait approach was advised. If her symptoms recurred, the plan was to start hormonal therapy.

DISCUSSION

Endometriosis is the presence of endometrial tissue in extrauterine sites and is common in women of reproductive age. The bowel is the third most common area for endometriosis after the ovaries and peritoneum. It has a non-specific presentation, mimicking inflammatory bowel disease, diverticulitis or even malignancy, and can vary from microscopic foci to large space-occupying lesions.¹⁻⁴

Bowel endometriosis is diagnostically challenging as evaluation of symptoms and clinical examination are often insufficient for an accurate diagnosis. Clinical symptoms include abdominal cramps, diarrhoea, constipation, vomiting, abdominal pain, increased urinary frequency and cyclical fresh rectal bleeding.⁵ Recommended investigations for endometriosis are transvaginal ultrasound, abdominal CT, pelvic MRI and colonoscopy. Endometriosis rarely involves the mucosa of the bowel, thus direct endoscopic visualisation of colorectal endometriosis

Figure 1 Dilated small bowel loops on abdominal X-ray.

Figure 2 Thickened caecal wall on abdominal CT.

is uncommon but colonoscopy is normally performed to rule out mucosal involvement or malignancy.⁶⁻⁷

Given the initial CT findings alongside the presenting symptoms of diarrhoea and abdominal pain in the absence of any cyclical abdominal discomfort associated with her menstrual cycle, it was not unreasonable for Crohn's disease to be the considered diagnosis. Additionally, the blood and faecal tests supported inflammation, and the patient clinically responded well to steroids. It is not unusual to fail to obtain definitive histology for colonoscopy in the presence of an ileal stricture. The patient was started on high dose steroid and azathioprine but fortunately prompt histopathology reporting allowed for this to be stopped swiftly and the patient came to no harm.

Standard treatment for endometriosis affecting the bowel is usually non-surgical. However, in this case, due to her acute small bowel obstruction, surgical intervention was required.

There are reported cases of endometriosis in the colon resulting in large bowel obstruction in the literature but ileal involvement is rare and has an incidence of 4.1%. In all these cases, final diagnosis was normally only confirmed on histopathology.⁸⁻¹⁰

This case should serve as an aide-mémoire to remind physicians of this rare condition and the diagnostic challenges it provides.

Learning points

- ▶ Intestinal endometriosis should be considered in women of childbearing age presenting with bowel obstruction.
- ▶ Intestinal endometriosis is diagnostically challenging but a good history (taking into account gastrointestinal symptoms related to menses), clinical examination and use of available investigations can help in narrowing the differential diagnosis.
- ▶ Owing to the complexities of diagnosis, these patients should be discussed at multidisciplinary meetings to ensure appropriate investigation and management.

Competing interests None declared.

Patient consent Obtained.

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