

Case Report

Intestinal Obstruction Due to Rectal Endometriosis: A Surgical Enigma

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Obstructed rectal endometriosis is an uncommon presentation. The clinical and intraoperative presentation may present as malignant obstruction. The difficulty in making the diagnosis may delay the definitive management of the patient. We report a unique case of rectal endometriosis mimicking malignant rectal mass causing intestinal obstruction and discuss the management of the case. [*Asian J Surg* 2006; 29(3):149–52]

Key Words: intestinal obstruction, rectal endometriosis

Introduction

Endometriosis is a relatively frequent disease occurring in 3–19% of menstruating women. Early signs and symptoms will allow assessments and investigations to be performed for the establishment of the diagnosis. Hence, this will allow medical treatment to be given. However, in the unusual presentation of endometriosis with intestinal obstruction, treatment option is limited to surgery. We report a unique case of endometriosis mimicking malignant rectal mass causing large bowel obstruction. The difficulty in confirming the diagnosis had created an enigma in deciding on the definitive management of this patient.

Case report

A 40-year-old woman presented with a history of lower abdominal pain, constipation, abdominal distension and vomiting for 1 week. There was no history of alteration of bowel habit or per rectal bleeding. She had regular menses with normal flow with occasional mild dysmenorrhoea. There was no history of dyspareunia. She has four children

and had two abortions. She had a caesarean section 5 years ago. There was no history of recurrent abdominal pain.

On physical examination, she was severely dehydrated; her temperature was 38°C, tachycardia and hypotensive. Abdominal examination revealed a lower midline surgical scar. The abdomen was distended and there was tenderness at the lower quadrant. The bowel sound was hyperactive and rectal examination did not reveal any mass. Abdominal radiograph showed dilated large and small bowels. In view of the previous surgery, a diagnosis of intestinal obstruction due to adhesion was made. Initially, she was treated with conservative management by bowel rest, drip and suction and antibiotics. However, after 24 hours of conservative management, her condition worsened. The abdomen became more distended and tender with features of peritonism. In view of her condition, an emergency laparotomy was performed.

Intraoperatively, there were dilated bowels until upper rectum. The uterus was adherent to the anterior abdominal wall and the sigmoid colon. There was a constricting mass felt at the mid rectum. During the operation, she developed a few episodes of hypotension despite inotropic

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Figure 1. Computed tomography of the pelvis shows a mass in the rectum (arrow).

support. In view of her labile condition precipitated by sepsis, a defunctioning sigmoid colostomy was performed. Postoperatively, she was managed in the intensive care unit. Overwhelming sepsis, wound dehiscence and bronchopneumonia complicated her condition. She recovered fully after 1 month. With the intraoperative findings, the clinical diagnosis of obstructed carcinoma of mid rectum was made.

One month later, colonoscopy was performed. There was a stenosis of the rectum at 15 cm from the anal verge. However, the mucosa of the rectum was normal. The findings were similar; the colonoscopy was performed from the distal sigmoid stoma. Endoscopic biopsy showed multiple fragments of tissue exhibiting regularly spaced mucin secreting gland. Necrotic tissue and blood clots were present. The lamina propria was oedematous and infiltrated by lymphoplasmacytic cells. There was no dysplasia or malignant cells seen. Her CEA level was normal. A computed tomography (CT) scan of the abdomen and pelvis revealed a mass of 2 × 3 cm at the mid rectum with clear perirectal plane and no distant metastases (Figure 1). Although the clinical and radiological features were suggestive of mid rectal mass mimicking rectal tumour, no neoadjuvant chemoradiotherapy was given due to lack of histological diagnosis.

Three months after the initial surgery, she underwent laparotomy for resection of the rectal mass and reversal of colostomy. The surgery and postoperative recovery were uneventful. The resected rectum showed a constricted midrectal tumour. The cut section of the tumour showed a 2 × 2 × 2 cm whitish surface intramural tumour without rectal mucosa involvement (Figure 2). Microscopic

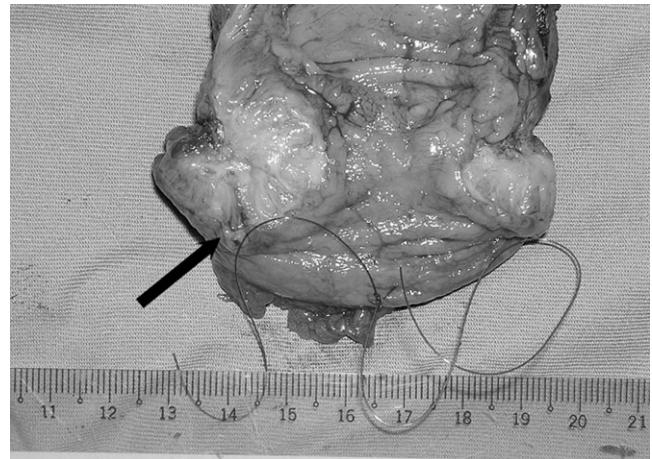


Figure 2. The gross specimen shows the rectal mass (arrow) without rectal mucosa involvement.

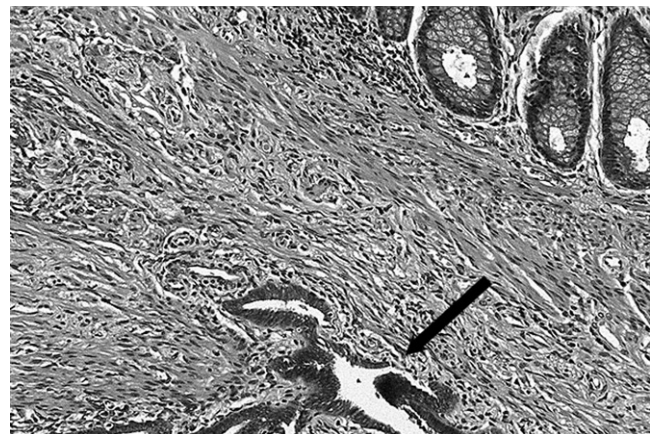


Figure 3. Sections from the colon specimen show the presence of submucosal endometrial glands (arrow) and stroma in the submucosal and intramuscular layers. No serosal involvement is seen. The colonic mucosa appears normal.

features showed multiple foci of endometrial gland and stroma in the submucosal and intramuscular layer with hyperplasia of the smooth muscle layer (Figure 3). The mucosal layer was normal. No neoplastic cells were seen. Based on the histopathological findings, the final diagnosis of rectal endometriosis was made. Subsequently, she was referred to the gynaecologist and treated with subcutaneous Zoladex. At 6-month follow-up, she remains asymptomatic.

Discussion

Endometriosis is defined as the presence of functioning ectopic endometrial tissue. The intestinal tract is the most common location for endometriosis, representing 12–37% of cases. Rectosigmoid is the commonest site for

intestinal endometriosis, which account for 70% of cases. Rectal endometriosis is characterized by pain and discomfort during defaecation, painful tenesmus and dyspareunia. It may be associated with per rectal bleeding if it involves rectal mucosa. However, rectal endometriosis associated with intestinal obstruction is uncommon. Unless the patient presents with symptoms of endometriosis, it is difficult to establish the diagnosis of intramural rectal endometriosis and 80% of these cases are associated with genital endometriosis.¹ The obstruction of rectal endometriosis is mainly associated with transmural involvement forming stricture or masses. It is largely due to profound smooth muscle hypertrophy around the endometrial foci present in the muscularis propria. This phenomenon is well defined in the formation of adenomyosis of the uterus.²

During endoscopic and radiological examination, intramural rectal endometriosis may reveal extrinsic process without any specific mucosal features. The mucosal involvement of rectal endometriosis is unusual. The biopsy taken during routine colonoscopic examination may not yield good tissue because biopsy material is superficial and endometriosis usually involves the submucosa, muscular and serosa of the bowel wall. Tissue obtained in this manner may reflect chronic injury but lack diagnostic endometriotic foci, thereby introducing the potential for misinterpretation as one of the various other disorders in the clinical differential.² However, previous reports have described various mucosal changes without any specific pattern associated with rectal endometriosis. The mucosal changes include ulceration, chronic inflammation composed of lymphocytes and plasma cells, glandular architectural abnormalities and features suggestive of ischaemic colitis.^{2,3} There was no report of granulomas seen on histological section. Therefore, tuberculosis should be considered if there is presence of granulomas. Transrectal ultrasound (TRUS) is useful in establishing an accurate diagnosis.⁴ Furthermore, it can facilitate targeted deep rectal biopsies to obtain histological diagnosis. A noninvasive diagnostic technique has been desired for effective clinical management of rectal endometriosis. CT scan of the abdomen can be used for the assessment of rectal endometriosis when present as rectal mass. However, magnetic resonance imaging and TRUS have shown promising results in detecting rectal endometriosis.^{5,6} Although each method has high sensitivity and specificity

in diagnosing colorectal involvement, the combination of both modalities is required to avoid false-positive results and to evaluate the extent of deep posterior pelvic involvement.⁷

Due to its infiltrating nature and tendency to produce stenosis leading to obstruction, the clinical presentation of intestinal endometriosis often raises suspicion of bowel carcinoma. Sometimes during operation, its appearance may be impossible to distinguish from that of malignant neoplasia.⁸ In these situations, a frozen section diagnosis may be helpful before embarking on major surgical resections.⁹ When a patient presents with intestinal obstruction or severe advanced intestinal endometriosis, the only treatment is surgical resection. This is due to the fact that endometriotic tissue in the bowel muscularis undergoes muscle cell hyperplasia and fibrosis, which are resistant to medical treatment. Other authors have reported high rates of recurrence after medical treatment for patients with symptomatic bowel endometriosis but those who treat more aggressively with surgical resection have found that these patients have complete to nearly complete relief of their symptoms.¹⁰⁻¹²

In view of the presentation that may present as malignant obstruction, tissue diagnosis must be obtained in order to manage the patient correctly, particularly for unresectable cases. Once the diagnosis of intestinal endometriosis is made, then treatment with danazol or progesterone derivatives is useful in the case of incomplete removal of endometriosis. There is a role for danazol or LHRH analogues before surgery. It may decrease inflammation or vascularization, thereby facilitating the surgical procedure. When confirmed endometriosis is not removed, radiological and endoscopic surveillance must be planned regularly while receiving medical treatment.¹³

In conclusion, rectal endometriosis is uncommon and can be difficult to diagnose, particularly when it is asymptomatic. If it occurs in the middle-age group, it can mimic malignancy, which makes further management more difficult. Histological diagnosis is important in pursuing the correct management for the problem.

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