

Case Report

Catamenial rectal bleeding as a manifestation of rectosigmoid endometriosis in a young woman: a case report and literature review

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ABSTRACT

Bowel endometriosis is a manifestation of deep endometriosis that most commonly involves the rectum and sigmoid colon. Diagnosis can be challenging because disease involvement usually predominates in the outer layers of the bowel wall, while endoscopic findings may be normal or nonspecific. We report the case of a 21-year-old woman with a three-year history of recurrent catamenial rectal bleeding, an unrevealing initial gynecologic evaluation, and a previous colonoscopy without relevant abnormalities. Because bleeding persisted, repeat colonoscopy was performed and showed edema and loss of the vascular pattern in the rectum and sigmoid colon. Rectosigmoid biopsies demonstrated glandular structures extending toward the submucosa that were morphologically compatible with endometriosis. Clinicopathologic correlation established the diagnosis of bowel endometriosis. This case highlights the importance of considering rectosigmoid endometriosis in reproductive-aged women with cyclic rectal bleeding, even after a previous negative endoscopic evaluation, and illustrates that colonoscopic biopsy may establish the diagnosis when mucosal or submucosal involvement is present.

Keywords: Bowel endometriosis, Catamenial rectal bleeding, Colonoscopy, Hematochezia, Rectosigmoid endometriosis

INTRODUCTION

Endometriosis is a chronic inflammatory disease characterized by the presence of endometrium-like tissue outside the uterus and affects approximately 10% of women of reproductive age.^{1,2} Gastrointestinal involvement is an important manifestation of deep endometriosis and predominantly affects the rectum and sigmoid colon.³⁻⁵

Bowel endometriosis typically infiltrates from the serosa toward the muscularis propria, whereas mucosal involvement is uncommon.^{4,5}

Therefore, colonoscopy may be normal or show nonspecific changes, and superficial biopsies have limited diagnostic yield.⁶⁻¹¹ Catamenial rectal bleeding is an uncommon manifestation but represents an important clinical clue when it reproducibly occurs around menstruation.^{6,9-10}

We presented the case of a 21-year-old woman with recurrent catamenial rectal bleeding for three years and a previous normal colonoscopy, in whom rectosigmoid endometriosis was diagnosed through biopsies obtained during a repeat colonoscopy. We review the literature with emphasis on clinical presentation, the limitations of endoscopic evaluation, and the roles of imaging and histopathology.

CASE REPORT

A 21-year-old woman with no relevant medical history presented with a three-year history of recurrent catamenial rectal bleeding. The bleeding began several days before menstruation, persisted throughout the menstrual period, and resolved spontaneously after menstruation, recurring monthly.

She was initially evaluated by Gynecology, but no cause for her symptoms was identified. An initial colonoscopy showed no relevant abnormalities. Because rectal bleeding persisted, she was subsequently evaluated by Gastroenterology. Laboratory testing showed mild normocytic, normochromic anemia with a hemoglobin level of 11 g/dl; fecal calprotectin and stool studies were within normal limits.

Repeat colonoscopy showed edema and loss of the vascular pattern in the rectal and sigmoid mucosa, findings initially suggestive of proctitis of undetermined etiology. Multiple biopsies were obtained from both regions for histopathologic examination (Figure 1).

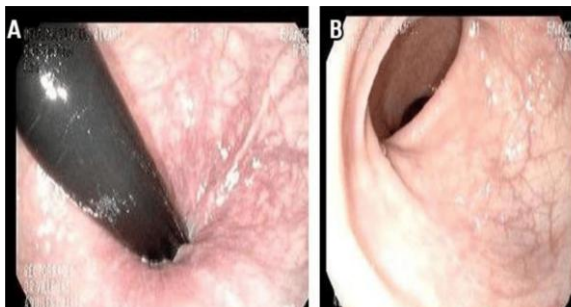


Figure 1: Colonoscopic findings in the rectosigmoid region. Edematous mucosa with focal loss of the vascular pattern and a nonspecific inflammatory appearance. Multiple biopsies were obtained for histopathologic examination.

Histopathologic examination of the rectosigmoid biopsies showed sparse glandular structures extending toward the submucosa, morphologically compatible with endometriosis, in two of three fragments. Serial rectal biopsies showed similar findings in three of 14 fragments, associated with moderate chronic inflammation (Figure 2). Correlation of the recurrent catamenial rectal bleeding with the histopathologic findings established the diagnosis of bowel endometriosis involving the rectum and rectosigmoid region. After histopathologic diagnosis, the

patient was referred to Gynecology for further assessment of disease extent and treatment planning.

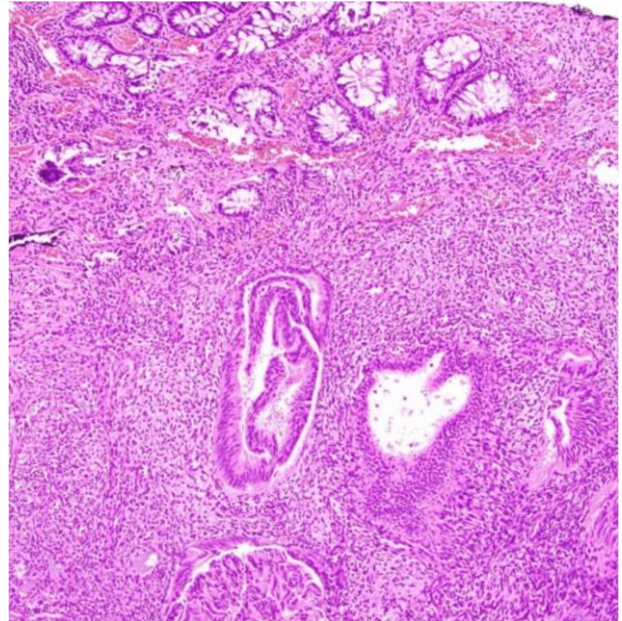


Figure 2: Endometriosis intestinal.

DISCUSSION

Bowel endometriosis poses a diagnostic challenge because its gastrointestinal manifestations are variable and may overlap with functional gastrointestinal disorders, inflammatory bowel disease, and other causes of gastrointestinal pain or bleeding.^{5,7,8} The rectum and sigmoid colon are the most frequently affected intestinal segments.^{3,5} In this setting, the temporal relationship between symptoms and the menstrual cycle is particularly relevant. Catamenial rectal bleeding is uncommon, but its presence in a woman of reproductive age should substantially increase suspicion for bowel endometriosis.^{6,9}

This case is notable for three reasons: the patient's young age, the persistence of a catamenial pattern for approximately three years, and a previous colonoscopy without abnormalities. The absence of endoscopic findings does not exclude the disease because bowel lesions typically develop from the serosa and involve the muscularis propria before reaching the submucosa or mucosa.^{4,5} Consequently, the mucosa may appear normal or show nonspecific inflammatory changes, as in this patient.

The literature confirms the limited diagnostic yield of colonoscopy for bowel endometriosis. Bong et al. reported that, even among patients with confirmed intestinal disease, diagnosis by colonoscopic biopsy was uncommon, with histologic confirmation of endometriosis in only four patients (13.3%).¹¹ This is explained by the usual depth of the lesions and the limited ability of conventional biopsy forceps to obtain submucosal or

deeper tissue. Therefore, colonoscopy is more useful for excluding alternative diagnoses or evaluating lesions involving the lumen than as a primary test for detecting deep endometriosis. Published reports demonstrate that when disease reaches the mucosa or submucosa, endoscopic biopsy can establish the diagnosis. Keith et al. described a 41-year-old woman with cyclic rectal bleeding and rectosigmoid involvement whose diagnosis was supported by colonoscopy, biopsy, and magnetic

resonance imaging.⁹ Similarly, Subbaraj et al. reported a 40-year-old woman with periodic rectal bleeding and hypervascular sigmoid lesions, with histopathologic confirmation of endometriosis.¹⁰ Our patient was considerably younger and showed only nonspecific inflammatory changes in the rectum and sigmoid colon, highlighting that the absence of a mass or a typical endoscopic lesion does not preclude histologic diagnosis (Table 1).

Table 1: Selected publications addressing endoscopic diagnosis and rectal bleeding in bowel endometriosis.

Publications	Age/design	Presentation	Endoscopic finding/diagnosis	Relevance
Keith et al, 2020⁹	41 years; case report	Cyclic rectal bleeding	Colonoscopy + biopsy + MRI; rectosigmoid endometriosis	Example of catamenial rectal bleeding with histologic confirmation
Subbaraj et al, 2021¹⁰	40 years; case report	Periodic rectal bleeding and abdominal pain	Hypervascular sigmoid lesions; positive biopsy	Visible mucosal involvement and colonoscopic diagnosis
Bong et al, 2019¹¹	Retrospective series	Variable intestinal presentations	Diagnostic colonoscopic biopsy in 4 patients (13.3%)	Illustrates the low yield of endoscopic biopsy
Current case	21 years; case report	Catamenial rectal bleeding for 3 years	Edema and loss of vascular pattern; positive rectosigmoid biopsies	Histologic diagnosis despite nonspecific endoscopic findings

CONCLUSION

Bowel endometriosis should be considered in the differential diagnosis of recurrent rectal bleeding in women of reproductive age, particularly when there is a consistent temporal association with menstruation. A previous normal colonoscopy does not exclude this condition because mucosal involvement is uncommon and endoscopic findings may be nonspecific. This case highlights the value of a focused clinical history and clinicopathologic correlation when the presentation is suggestive.

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