



# Intestinal Endometriosis Leading to Recurrent Hematochezia

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## ABSTRACT

Endometriosis occurs when endometrial tissue existing outside of the endometrial cavity has an inflammatory response, which can lead to swelling and scarring, generally in the abdominopelvic cavity. It commonly presents in reproductive-age women and very infrequently presents in postmenopausal women. We report a case of a 51-year-old woman who underwent a hysterectomy a decade before presentation with new-onset intermittent proctalgia and hematochezia. Her colonoscopy showed a sigmoid polyp, which was confirmed to be endometriosis on histopathology. This case highlights intestinal endometriosis as a rare differential to be considered in women, regardless of age, with abnormal rectal bleeding.

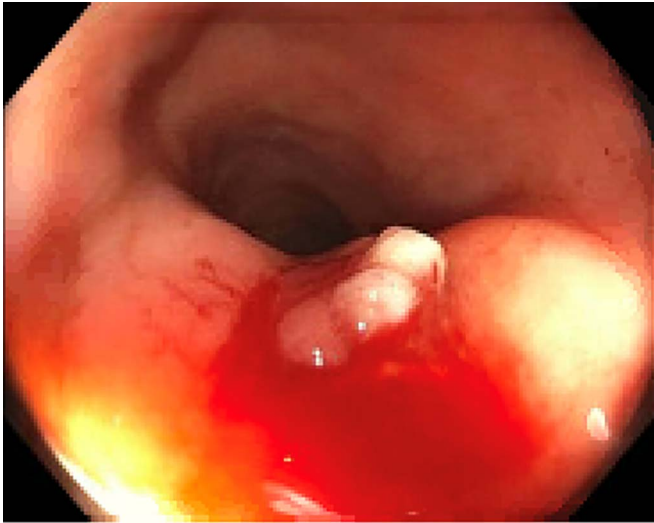
## INTRODUCTION

Endometriosis occurs when ectopically occurring endometrial tissue becomes inflamed because of estrogen-dependent activation, leading to swelling and scarring. The prevalence in women of reproductive age is 1%–2%, and in 5.4% of those cases, the ectopic tissue implants within the gastrointestinal (GI) tract, most commonly within the wall of the rectum, followed by the sigmoid colon.<sup>1,2</sup> Intestinal endometriosis can lead to changes in stool consistency, abdominal pain, and hematochezia, although most women remain asymptomatic. The diagnosis of intestinal endometriosis requires high clinical suspicion because these symptoms are nonspecific and can mimic other conditions. There is no stepwise approach to the workup, and the gold standard for diagnosis remains histopathological.

## CASE REPORT

A 51-year-old woman with a medical history of migraines, constipation, and hemorrhoids presented to the clinic for intermittent rectal pain and hematochezia for the preceding 2 months. She had previously noted rectal pain while passing hard stools along with mild bleeding when straining from her hemorrhoids. The current bleeding, however, was not associated with straining, hard stools, or discomfort from hemorrhoids. There was no recent weight loss or change in bowel patterns. She had 2 uncomplicated vaginal deliveries and had undergone a vaginal hysterectomy without oophorectomy 11 years earlier for an unclear indication, but denied having any kind of malignant or premalignant indication. Her gynecologist performed a transvaginal ultrasound that revealed no acute abnormality. The clinical examination showed a soft abdomen without evidence of tenderness or a palpable mass. The digital rectal examination was notable for nonbleeding, nontender external hemorrhoids. Still, there was significant tenderness on digital examination with appropriate rectal tone and descent. No blood or anal fissures were visualized. Given the recurrent hematochezia, a diagnostic colonoscopy was scheduled.

The colonoscopy revealed a 7-mm sessile polyp in the sigmoid colon that was removed with a cold snare (Figure 1). Histopathology of the polyp revealed well-circumscribed foci of small glands dispersed in a variably cellular stroma, without cytologic or architectural atypia to suggest a neoplastic process (Figure 2). An immunohistochemical stain for CD10 highlighted the stromal cells as



**Figure 1.** Colonoscopic view of a hypervascular lesion embedded at the sigmoid colon luminal wall.

endometrial-type stroma, which supported a diagnosis of endometriosis. There was a clear demarcation between the endometriosis and the colonic lamina propria (Figure 3). CDX2 staining showed benign colonic glands and helped confirm the presence of benign endometrial tissue (Figure 4).

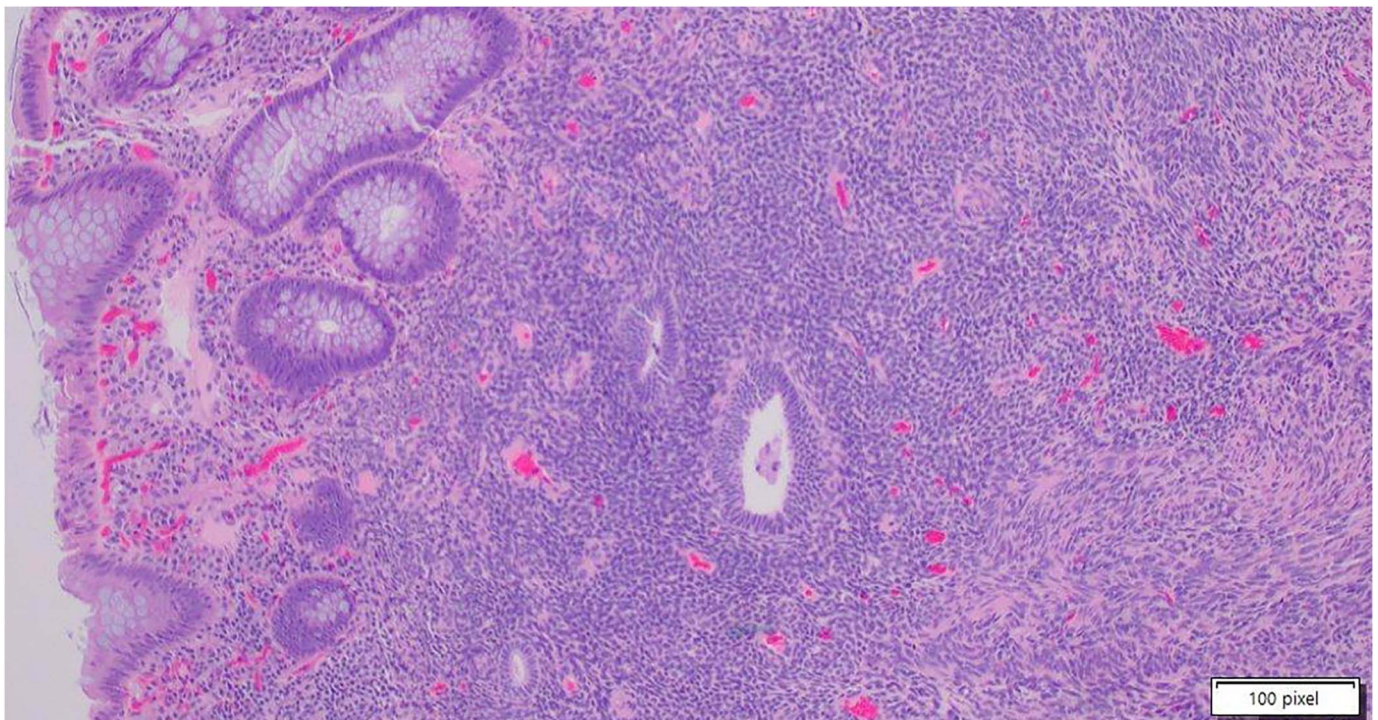
The patient had no gynecological symptoms or uterus, but she still had her ovaries, so a follicle-stimulating hormone (FSH) level was sent to confirm her menopause status. Her FSH was elevated to 56.6 mIU/mL (postmenopausal FSH is > 20

mIU/mL). The patient exhibited no further rectal pain and hematochezia after removal of the endometrial tissue 4 months out. Given the absence of other possible etiologies and resolution of symptoms after removal of the endometrial implant from the colon, we attribute her hematochezia to endometriosis.

## DISCUSSION

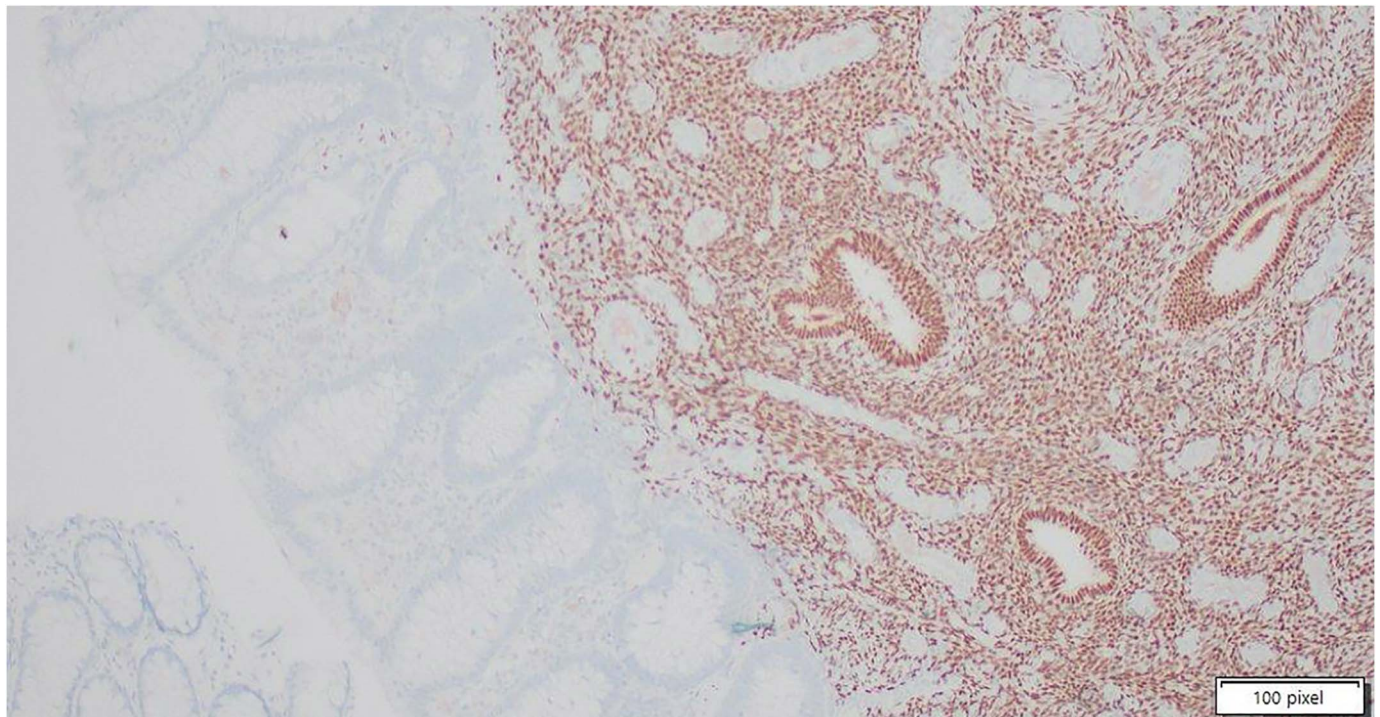
Endometriosis is defined as the presence of functioning endometrial glands and stroma outside the uterine cavity. Inflammation and functional activity are typically believed to be estrogen-dependent.<sup>3</sup> As a result, most women who have symptoms of endometriosis do so during their menstrual years rather than the low-estrogen state of menopause. Intestinal endometriosis consists of 5.4% of all endometriosis.<sup>2</sup> The most involved area is the rectum, accounting for ~70%–80% of GI endometriosis, followed by the sigmoid.<sup>2</sup> The most common symptoms are bowel habit changes, abdominal pain, and hematochezia. These symptoms are nonspecific and may impersonate many other conditions such as malignancy, inflammatory bowel disease, ischemic colitis, anorectal disease (ie, hemorrhoids or anal fissures), or diverticula.

Many imaging modalities may be used to aid in the diagnosis of endometriosis, including computed tomography, transvaginal ultrasound, endorectal ultrasound, or magnetic resonance imaging.<sup>4</sup> Magnetic resonance imaging has a high sensitivity (80%) and a high specificity (90%) for detecting pelvic



**Figure 2.** Hematoxylin and eosin images showing well-circumscribed foci of small glands dispersed in a variably cellular stroma within benign colonic mucosa.

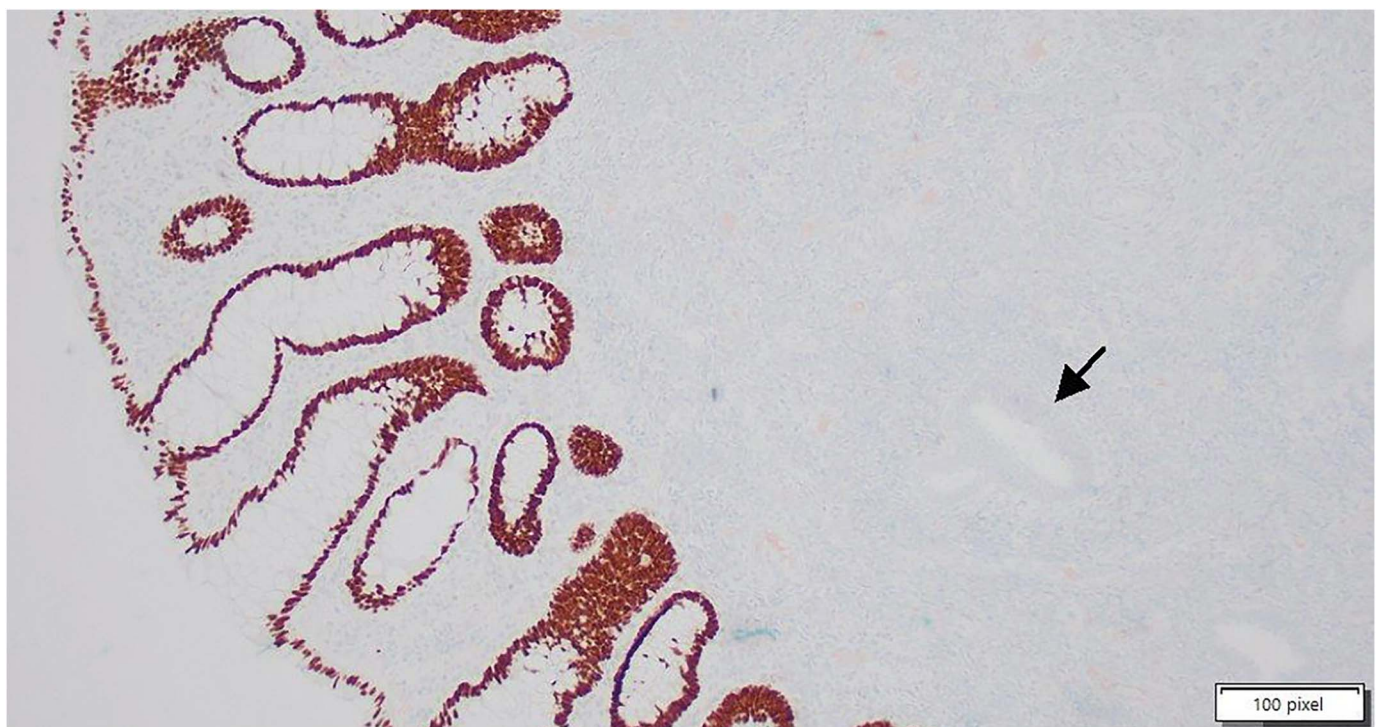




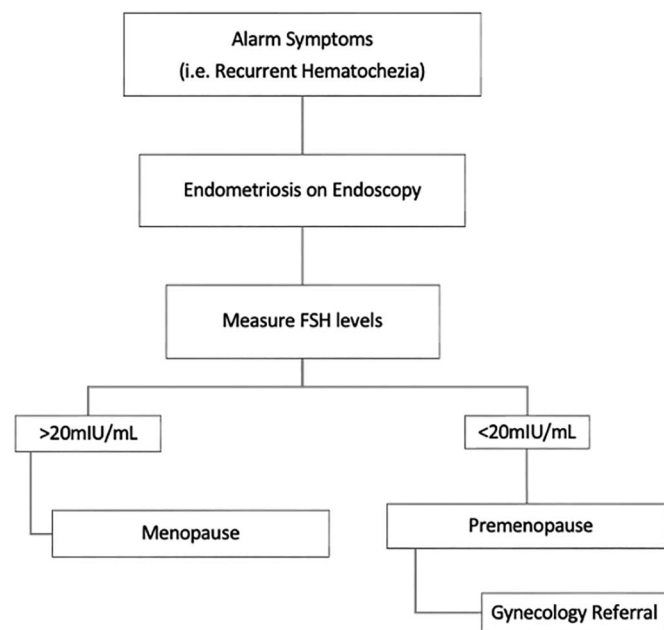
**Figure 3.** Immunohistochemical stain (brown chromogen) for CD10 expression highlights the cytoplasm of stromal cells as endometrial type stroma. The stain for CD10 delineates a clear demarcation between the endometriosis and the colonic lamina propria.

endometriosis.<sup>5</sup> However, a 2016 review established that no imaging test was superior to surgery in the diagnosis of endometriosis, but this review applies to endometriosis confined to the uterus.<sup>6</sup> In a patient without history of endometriosis or a

previous hysterectomy, intermittent rectal bleeding would prompt a GI workup rather than a gynecological workup. A colonoscopy with biopsy would be warranted and required to identify and confirm endometrial tissue in the GI tract.



**Figure 4.** By contrast, CDX2 stains benign colonic glands. Annotated, the negative endometrial gland (arrow).



**Figure 5.** Proposed algorithm for gastroenterologist when endometriosis is diagnosed through colonoscopy. FSH, follicle-stimulating hormone.

Treatment of endometriosis is dependent on the morbidity the symptoms have on the patient. Although most patients are not aware of their endometriosis, others can have debilitating symptoms such as dysmenorrhea, menorrhagia, dyspareunia, irregular bowel habits, painful defecation, hematochezia, and infertility, among others.<sup>7</sup> It has been shown that quality of life is comparable with medical and surgical treatment.<sup>8</sup> Nonetheless, only invasive treatments can fully eradicate the endometrial foci. In uncomplicated cases, medications that downregulate estrogen levels, such as oral contraceptive pills, gonadotropin-releasing hormone agonists, danazol, or progestins, have been shown to improve quality of life.<sup>8</sup> In severe cases where patients fail hormonal treatment or in patients who no longer want children but are of reproductive age, a total hysterectomy with bilateral oophorectomy may be preferred,<sup>9</sup> particularly if they present with complications such as severe bleeding, bowel obstruction, or concern for malignancy.

This case is particularly unique because the patient was asymptomatic from her endometriosis during her reproductive years and presented with symptoms in the postmenopausal state. If the patient were confirmed to be premenopausal, she would have to be referred to gynecology for further workup and treatment because endometriosis can recur spontaneously and be simultaneously present elsewhere in her abdominopelvic cavity. Despite her postmenopausal state, her symptoms resolved with resection of the intestinal endometriosis. No other lesions were visualized endoscopically, so we attribute her hematochezia to the endometriosis. Menopause is a low-estrogen state—not a no-estrogen state—so even the decreased levels in menopause are enough to cause symptoms. Furthermore, our patient was overweight, and because estrogen can be synthesized in adipose tissue, the risk of symptoms from

endometriosis in the postmenopausal state is not zero.<sup>10,11</sup> As such, we advise our gastroenterology colleagues to keep endometriosis in mind as a possible, if rare, cause of GI tract bleeding, even in the postmenopausal population (Figure 5).

## DISCLOSURES

Author contributions: M. Arjonilla: drafting of manuscript and is the guarantor of the article. A. Khander: drafting of manuscript; critical revision of manuscript for important gynecological intellectual content. T. Pal: preparation and interpretation of histopathological slides. D. Jamorabo: drafting of manuscript; critical revision of manuscript for important gastrointestinal intellectual content; study supervision.

Previous presentation: Abstract was accepted, but not yet presented at ACG 2022 Charlotte, NC. It will be presented by Dr. Marta Arjonilla.

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