



# Colon Endometriosis

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## Abstract

Endometriosis, frequently overlooked as a cause of chronic and recurrent abdominal pain in women of childbearing age, can occasionally involve the bowel, making its diagnosis a challenge. This article presents a case of colon endometriosis, highlighting the complexity of its diagnosis and management. Endometriosis should be considered in the differential diagnosis of recurring lower abdominal pain and other episodic bowel symptoms in women of child-bearing age. It commonly affects women between the ages of 25 and 45 but can also occur in younger women during their teenage years. Symptom relief often occurs after menopause [1]. Here we present a 35-year-old woman, presented to the gastrointestinal department with a two-month history of epigastric pain, accompanied by nausea and vomiting. She also experienced constipation and had previously observed blood in her stool, rectal hemorrhage, periumbilical pain, abnormal weight loss, and loss of appetite. Over two months, she lost 11 kg [from 74 to 63 kg], and her pain did not respond to treatment with Proton-Pump Inhibitors [PPIs].

## Introduction

High prevalence of gynecological conditions in women of Middle Eastern origin is reported, likely due to regional risk factors and mediators. Gastrointestinal endometriosis is a complex and often a misdiagnosed condition which causes debilitating pain and gastrointestinal symptoms that can greatly impact quality of life. It affects thousands of women of reproductive age worldwide; it affects 3% to 37% of all endometriosis cases [2]. Intestinal endometriosis is a condition in which the endometrial tissue, which is normally found inside the uterus, starts to grow outside the uterus and adhere to the lining of the intestine inducing a chronic inflammatory reaction [3]. It commonly involves the sigmoid colon, rectum, and the posterior pelvic compartment peritoneum, with over 90% of cases occurring in these areas [4]. This can cause various symptoms such as abdominal pain, bloating, constipation, diarrhea, extreme pain during a bowel movement, nausea, and vomiting. The condition can also cause complications such as bowel obstruction or perforation and can be difficult to diagnose as the symptoms overlap with other conditions.

Including irritable bowel syndrome, solitary rectal ulcer syndrome, inflammatory bowel disease, colorectal cancer, ischemic colitis, and metastatic tumor, may be considered as potential diagnoses for intestinal endometriosis. As digestive

or gastrointestinal pain is among the symptoms of intestinal endometriosis, it is frequently misidentified as Irritable Bowel Syndrome [IBS]. However, the discrepancy lies in the intestinal and frequency of pain. Typically, patients with IBS or other gastrointestinal disorders encounter pain multiple times a week for a month, but bowel endometriosis causes severe pain only during menstrual periods [4].

Nonetheless, identifying and diagnosing intestinal endometriosis is perplexing as it shares symptoms with other illnesses. Moreover, biopsy material taken during endoscopy procedures only reaches the surface of the intestinal wall while endometriosis predominantly affects deeper layers, which means that endometriosis foci may not be present in biopsy samples. During surgery, obstructive or firm lesions can also be misinterpreted as gastrointestinal carcinoma. Incorrect diagnosis inevitably leads to delayed treatment and greater economic burden from improper management [5].

Here, we present a clinical case of a 35-year-old woman who presented with a constellation of vague gastrointestinal symptoms. Her symptoms persisted and continued to worsen. Eventually, a diagnosis of intestinal endometriosis was made, and a multidisciplinary treatment plan was formulated to optimize her

clinical outcomes. In this article, we aim to discuss the key milestones in the diagnostic approach, investigations, medical management of intestinal endometriosis including current therapies and prognosis of this complex condition, with a focus on our experience with this challenging case.

## Materials and Methods

This case series study was conducted on the patients with histopathology and immunohistochemistry and Surgical Path Gross and Microscopic diagnosis of intestinal endometriosis, which is the most common type of extra-pelvic endometriosis. We retrospectively analyzed 35 years old Philippine women at tertiary referral centers from UAE, from 2022 to 2023. On histopathology and immunohistochemistry examination, with a CD68 hematoxylin and eosin staining and CD-68 staining had been used to confirm the diagnosis of intestinal endometriosis and any malignant transformation. We analyzed the patients' medical records including all demographic and clinical characteristics such as age, Body Mass Index [BMI], number of gravid and parity, presence of comorbidity, and operation history. We also recorded the location, the size, the number, and the treatment of abdominal wall endometriosis. Our hospital's NMC ROYAL [UAE, Abu Dhabi] approved our study which was in accordance. All procedures performed in the study were in accordance with the ethical standards of the intuition research committee. Informed consent was obtained the patients, allowing the use of their blinded clinical data for research purposes.

## Case Description

The patient, a 35-year-old woman, presented to the

gastrointestinal department with a two-month history of epigastric pain, accompanied by nausea and vomiting. She also experienced constipation and had previously observed blood in her stool, rectal hemorrhage, periumbilical pain, abnormal weight loss, and loss of appetite. Over two months, she lost 11 kg (from 74 to 63 kg), and her pain did not respond to treatment with Proton-Pump Inhibitors [PPIs]. Three months prior, the patient underwent surgery for ovarian fibroma, laparoscopy, surgical myomectomy, and excision of five intramural myomas with a total weight greater than 250g, as well as a left ovarian cystectomy. Upon physical examination, her height was 155 cm, weight 55 kg, and BMI 22.89. Her blood pressure measured 132/81 mm Hg, with a regular pulse of 100 bpm. Blood tests showed elevated neutrophil levels and high levels of total serum bilirubin, direct and indirect bilirubin, and low levels of Alkaline Phosphatase [ALP]. The remaining blood and stool investigations were within normal limits.

Abdominal ultrasound revealed no significant abnormalities. Pelvic ultrasound showed a heterogeneous myometrium with hypoechoic lesions (Figure 1A). A CT scan of the abdomen and pelvis, with and without contrast, demonstrated an area of concentric narrowing with a craniocaudal length of 5cm and a maximum thickness of 2 cm in the rectosigmoid, with the distal end approximately 18 cm from the anal verge. No extra-serosal invasion or locoregional lymph nodes were visible (Figure 1B). Colonoscopy findings: with biopsy revealed focal epithelial hyperplasia and focal xanthoma. A subsequent, deeper colon biopsy identified a 5 cm endometriosis tumor in the sigmoid colon, situated 18 cm from the anal verge (Figure 2). Histopathological and cytopathological biopsy results are presented in Figures 3A & 3B.



**Figure 1A:** Pelvis Ultrasound revealed Heterogeneous myometrium with hypoechoic lesions.



Figure 1B: A CT scan of the abdomen and pelvis, performed with and without contrast, showing an area of concentric narrowing in the rectosigmoid. The narrowed area has a craniocaudal length of 5 cm and a maximum thickness of 2 cm, with the distal end situated approximately 18 cm from the anal verge. No extra-serosal invasion or locoregional lymph nodes are visible.

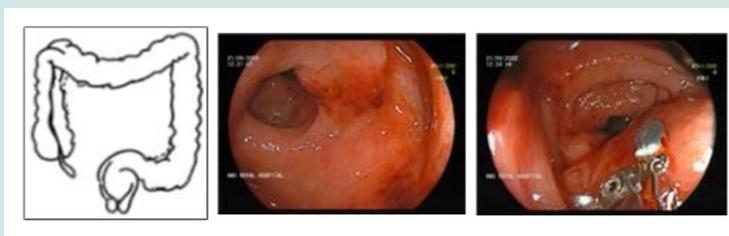


Figure 2: A colonoscopy was done which showed a 5 cm mass in the sigmoid colon 18 cm from the anal verge.

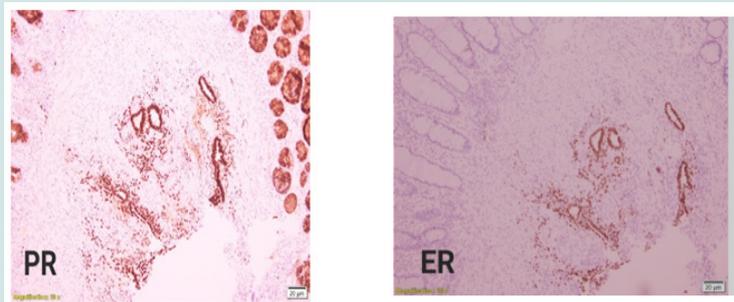


Figure 3A: The immunohistochemical staining of intestinal endometriosis.

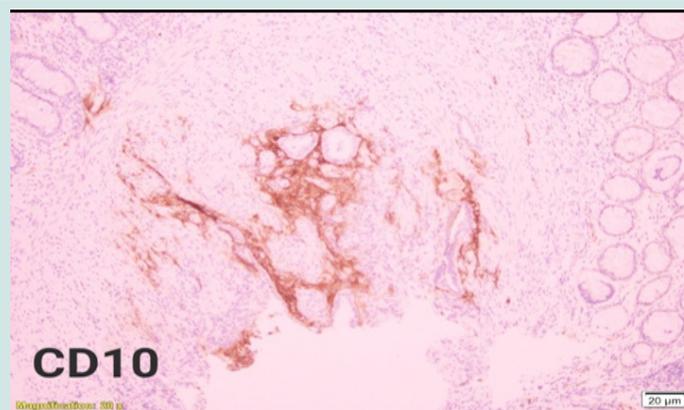


Figure 3B: Immunohistochemical marker for “stromal cells” of the uterus in intestinal endometriosis. The diagnosis of intestinal endometriosis was confirmed with CD68 positivity, using the primary antibody clone 514H12 from Leica Bond. Additionally, cytokeratin was identified using Monoclonal Mouse Anti-Human, Clone AE1/AE3 from DAKO.

Upper endoscopy indicated the presence of gastritis, but yielded a negative result for *Helicobacter pylori*. Surgical pathology at the gross and microscopic tissue level IV demonstrated positive results for endometrial mucosa on Immunohistochemistry [IHC], showing the presence of Estrogen Receptor (ER), Progesterone Receptor [PR], CD10, Cytokeratin 7 [CK7], and Cancer Antigen 125 [CA125].

## Management

The management of patients with intestinal endometriosis depends on a variety of factors such as the patient's symptoms, the size of the nodule, the degree of luminal stenosis, and any family history. Large symptomatic endometriosis lesions can be treated with hormonal therapy, surgery, or a combination of both. For cases with an estimated bowel stenosis of less than 60%, hormonal therapy can be safely offered. However, this therapy inhibits ovulation, making it a less suitable option for patients wishing to conceive. In our case, the patient was referred for surgery and had undergone surgery for ovarian fibroma, laparoscopy, surgical myomectomy, and excision of five intramural myomas with a total weight greater than 250g. Furthermore, a left ovarian cystectomy. Was performed. The patient had a successful post-operative recovery.

## Discussion

The gastrointestinal tract is the most common site of extrapelvic endometriosis, affecting 5–15% of women with pelvic endometriosis. Among women with intestinal endometriosis, the rectum and sigmoid colon are the most commonly involved areas [75–90%]. Endometriosis lesions, which are endometrial glands located outside the uterine cavity, can be superficial, ovarian, or deep. Lesions that invade the recto vaginal space and bowel are forms of deep infiltrating endometriosis. Other parts of the bowel commonly affected include the distal ileum [2–16%] and the appendix [3–18%]. Typically, only the serosa and muscularis propria are involved, with the mucosa very rarely affected.

Bowel endometriosis may be asymptomatic, but when symptoms are present, they can vary widely and include alterations in bowel habits, painful defecation, dyschezia, rectal bleeding, constipation, bloating, diarrhea, and painful bowel movements accompanied by back pain. Clinical, radiological, and endoscopic findings may be confused with conditions such as neoplasms, ischemic colitis, inflammatory bowel disease, post-radiation colitis, diverticular disease, and infections. Endoscopic diagnosis of colonic endometriosis has been reported [7]. But the endoscopic appearance is often not diagnostic, even if there is mucosal involvement. Endoscopically obtained biopsies usually yield insufficient tissue for a definitive pathological diagnosis [8]. Furthermore, endometriosis deposits can induce secondary mucosal changes, which mimic findings of other diseases such as inflammatory bowel disease, ischemic colitis, or even a neoplasm [9,10].

CT scans or barium enemas usually demonstrate an extrinsic

bowel compression, stenosis, or filling defect. MRI appears to be the most sensitive imaging technique for intestinal endometriosis [11]. However, the gold standard for diagnosis remains laparoscopy or laparotomy. Treatment options include surgery or hormonal manipulation, depending on the patient's age, desire to maintain fertility, and the severity and complications of the disease [12]. Recently, laparoscopic treatment of colorectal endometriosis, even in advanced stages, has been proven feasible and effective in nearly all patients [13]. In cases where surgical management is indicated, surgery should be performed by experienced surgeons in centers with access to multidisciplinary care.

Treatment should be tailored to each patient's symptoms and desires, with the goal of excising as much disease as possible while preserving organ function. Pharmacotherapy options that doctors may consider include estrogens, oral contraceptive drugs, GnRH analogues, and analgesics. Progestins are most commonly used, as they are generally well-tolerated and effectively reduce the severity of symptoms caused by pelvic endometriosis. More recently, aromatase inhibitors have been suggested for the treatment of endometriosis [7].

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the article, authorship, and/or publication of this article.

## Ethical approval

Our study received approval from our hospital's NMC ROYAL in Abu Dhabi, UAE. The approval was in accordance with the Declaration of Helsinki [approval number 2022-09-10].

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## Informed Consent

Informed consent was obtained from all subjects prior to their participation in the study, and for the publication of their anonymized information in this article.

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