CASE REPORT

Endometriosis of Sigmoid Colon Mimicking Cancer: A Rare and Abnormal Presentation.

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ABSTRACT

Background: Endometriosis causing intestinal obstruction could be misdiagnosed as colon cancer due to similarities in clinical presentation. This is a case of endometriosis of sigmoid colon in a 37-year-old nulliparous woman who presented with intestinal obstruction that necessitated partial colectomy. Histological examination revealed endometriosis of the sigmoid colon and the report was received by both the surgeons and patient with joyous surprise. We present this case for its mimic of colon cancer clinically, rarity and abnormal presentation.

Keywords: Endometriosis, Sigmoid colon, Intestinal Obstruction, Colon Cancer.

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Introduction

Endometriosis is an important clinical condition that causes infertility, dysmenorrhoea, pelvic pain and other problems. The disorder is principally a disease of women in active reproductive life, most often in the third and fourth decades, affecting approximately 10% of women.[1,2] It is defined as the presence of endometrial tissue outside of the uterus[3] and occurs in the following sites, in descending order of frequency: (1) ovaries; (2) uterine ligaments; (3) rectovaginal septum; (4) cul de sac; (5) pelvic peritoneum; (6) large and small bowel and appendix; (7) mucosa of the cervix, vagina, and fallopian tubes; and (8) laparotomy scars.[1] Intestinal endometriosis usually arises in the rectum and sigmoid colon in 80% of cases but rarely causes intestinal obstruction.[3,4]

Some of the theories supporting pathogenesis of endometriosis include; retrograde menstruation, whereby menstrual tissue refluxes through the fallopian tubes and implants on pelvic structures. In the coelomic metaplasia theory, endometriotic lesions develop when coelomic mesothelial cells of

the peritoneum undergo metaplasia. Another theory postulates the circulation and implantation of ectopic menstrual tissue via the venous or the lymphatic system, or both. However, none of these theories can completely explain the origin and behaviour of this disease.[5,6] More recent studies have suggested an immunological aetiology with an alteration of peritoneal factors that predispose certain women to endometriosis. At surgical sites, endometriosis is usually due to iatrogenic displacement of endometrial glands and stroma at the time of surgery.[6]

It is usually asymptomatic, but may cause non-specific symptoms, such as abdominal colic-like pain, nausea, vomiting, and general symptoms of intestinal obstruction.[4,7] This is a case of sigmoid colon endometriosis in a 37-year-old nulliparous woman who presented with acute intestinal obstruction mimicking colonic tumour.

Case Report

A 37-year-old nulliparous woman presented with 8-year history of recurrent left iliac fossa pain that was colicky. The pain was mostly associated with her menstrual cycle. There was also history of passage of blood per rectum but no tenesmus, anorexia or weight loss. Recent episode was eight days prior to presentation with associated constipation, abdominal distension and bilious vomiting. There was no fever or cough.

Physical examination revealed a young woman, afebrile, not pale, anicteric but dehydrated. Digital rectal examination revealed empty rectum. Blood pressure was 90/60mmhg and packed cell volume (PCV) was 40%. Plain abdominal x-ray shows distended large and small bowels (Figure 1). Assessment of acute intestinal obstruction secondary to left-sided large bowel obstruction was made. Patient was resuscitated and had an emergency exploratory laparotomy. A constricting tumour at the recto-sigmoid junction was found intraoperatively. She subsequently had partial colectomy with oncological margins and primary colorectal anastomosis. The resected loop of bowel was submitted in formalin for histopathological evaluation. The gross examination showed a mass involving the wall of the colon resulting in near total occlusion of the lumen with proximal bowel dilatation. Cut section through the mass showed grey white solid areas with small foci of haemorrhages. A haematoxylin and eosin (H and E) stained paraffin embedded tissue sections made from it showed colonic mucosa with endometrial glands and stroma within the submucosa, muscularis propria and serosa (Figures 2a and 2b). Foci of hemosiderin and haemorrhages are also seen. On this basis, a diagnosis of endometriosis of sigmoid colon was made.

Figure 1: Radiograph showing distended bowel with gas.

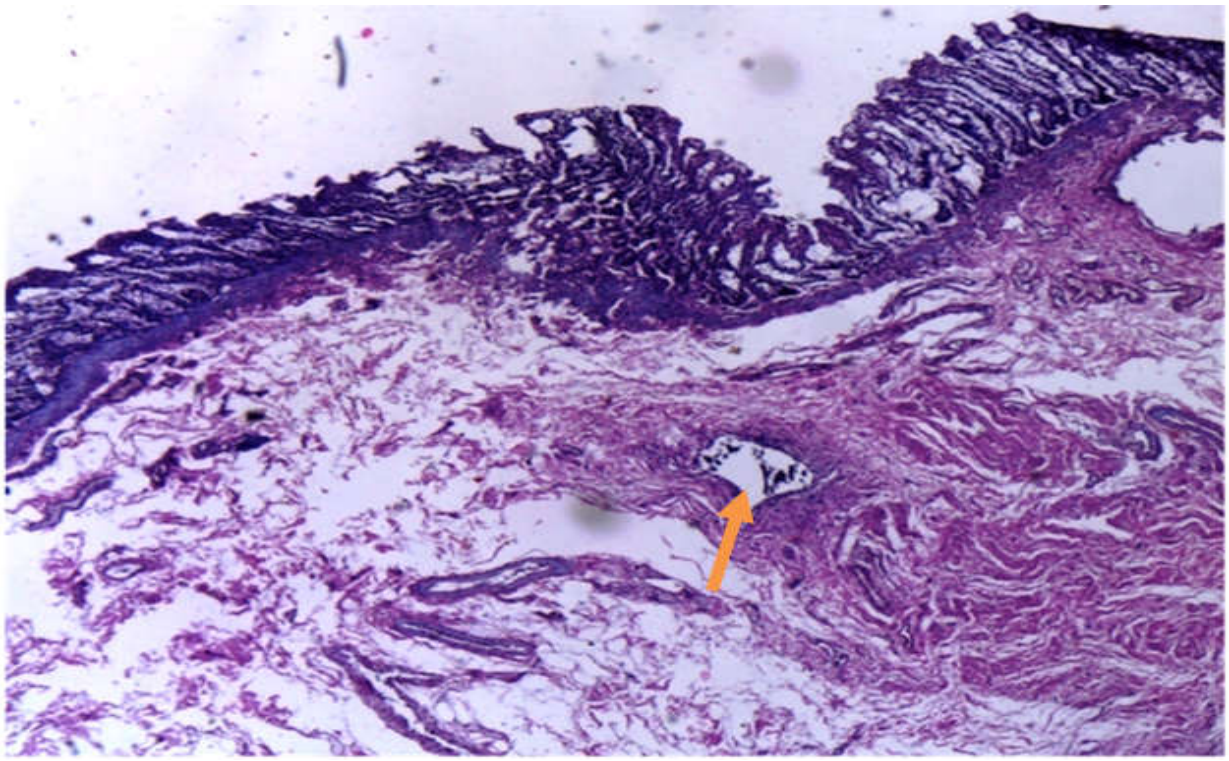

Figure 2a: Photomicrograph showing endometrial gland and stroma within colonic submucosa (arrow) (H & E, X40).

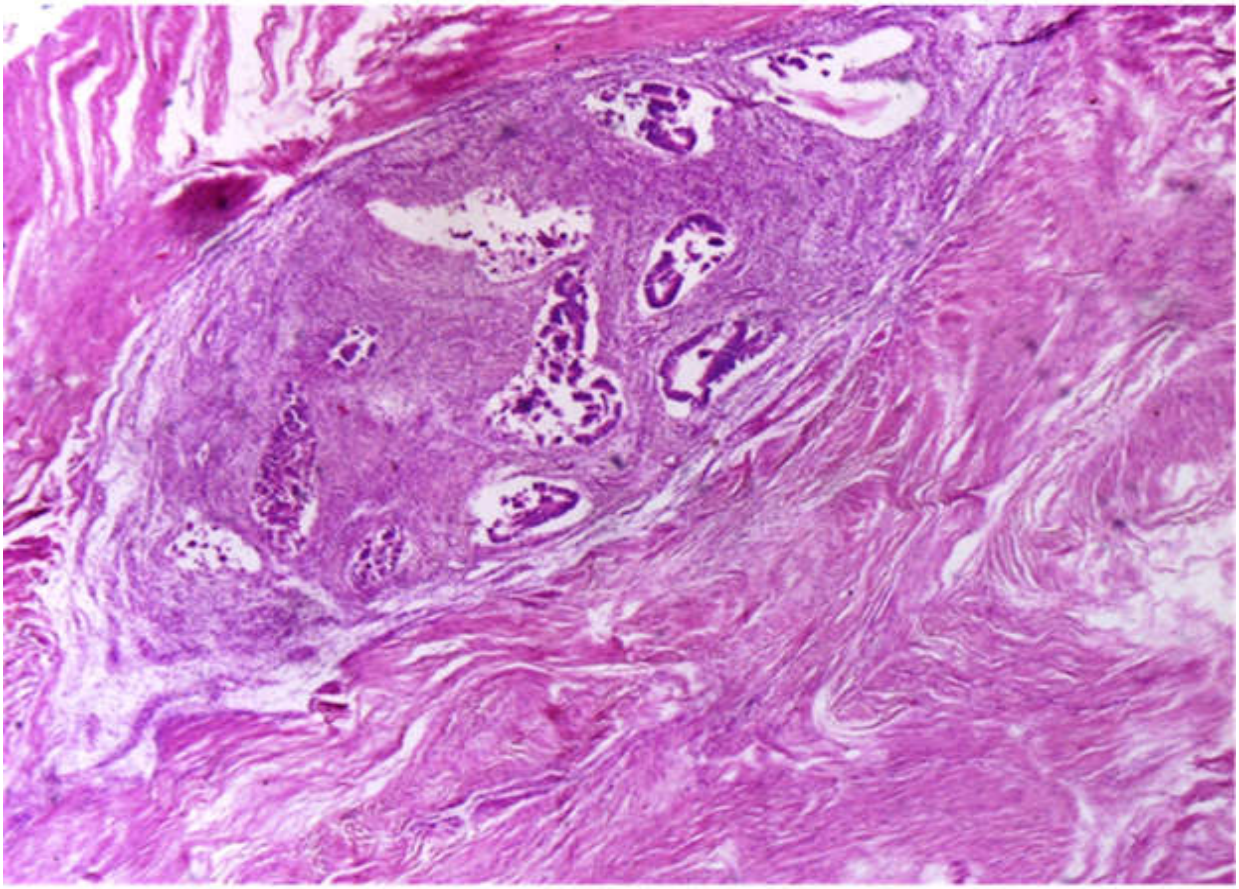

Figure 2b: Photomicrograph showing multiple endometrial glands and stroma within the muscularis propria (H & E, X40).

Discussion

Intestinal endometriosis mostly occurs in nulliparous women of childbearing age.[8] The probability of endometriosis is 3 to 10 times greater among first-degree relatives of women with this disease than among control subjects. Women with anomalous reproductive tracts and resultant obstruction of menstrual out flow are also at increased risk of endometriosis. Increased parity and prolonged or irregular menses decrease the likelihood of the disease, whereas nulliparity, subfertility, and prolonged period since pregnancy are all associated with an increased risk of endometriosis.[5] Twenty to 50% of women who undergo laparoscopic assessment of infertility or pelvic pain are diagnosed with endometriosis.[5] The rate of intestinal involvement in endometriosis cases is 3 to 37%.[7,9] The recto-sigmoid colon (70-80%), vermiform appendix, terminal ileum and caecum are the most affected segments, in decreasing order of occurrence.[4,7,8,10,11] Most patients who develop colonic endometriosis have a prior diagnosis of or associated pelvic endometriosis; however, some present ab initio with intestinal endometriosis. Kaufman *et al*., in their review, found that 44% had no prior diagnosis of endometriosis.[7] This case has never been previously diagnosed with pelvic endometriosis.

The symptoms of intestinal endometriosis vary according to the site of involvement. The symptoms of bowel endometriosis are

usually abdominal pain, nausea, vomiting, faecal tenesmus, painful defaecation, alternating constipation and diarrhoea, distention, and rectal bleeding.[2,7,9] In fact, according to Jubanyik and Comite in Chibuzo *et al*, the symptoms of intestinal endometriosis are cyclical in approximately 40% of patients.[7] Only a few cases of endometriosis of rectosigmoid location have been reported as acute abdomen.[10] Intestinal endometriosis specimens often show serosal and subserosal nodules less than 5cm in diameter with smooth muscle hypertrophy. The hypertrophic smooth muscle could promote intestinal obstruction (luminal stenosis). The grey cut surface may have minute areas of haemorrhage.[7,10] This is similar to both gross and histological findings in this case report. In cases of intestinal endometriosis, the need for colectomy ranges from 0.1 to 0.7% of the cases.[10,11] It can manifest as superficial or profound lesions. The superficial lesions endanger the serosa and are generally the size of the head of a pin and surrounded by scarce fibrotic tissue. The deepest lesions endanger the muscularis propria or even the submucosa and mucosa in patients with gastrointestinal symptoms. This involvement results in secondary fibrosis which provokes thickening of the wall and decreases the intestinal lumen.[12] The most frequently affected intestinal layer is the serosa, followed by the muscularis propria.[12] In this present case the submucosa, muscularis propria as well as serosa were involved. Segmented intestinal resection is recommended when endometrial lesions affect the rectum and/or sigmoid colon beyond the internal muscular layer and more than 40% of the circumference of these organs is compromised.[12] This our case had surgery simply because more than 70% of the circumference of the sigmoid colon was compromised and more importantly because colonic cancer was also highly suspected.

Conclusion

Intestinal endometriosis can be extremely difficult to diagnose preoperatively because it can mimic or coexist with several gastrointestinal lesions such as neoplasia, inflammatory intestinal disease and irritable bowel syndrome. Hence, the need for high index of suspicion in women of childbearing age with features of intestinal obstruction, pelvic pain with or without rectal bleeding.

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