Case Report

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Endometriosis of Sigmoid Colon Mimicking Colon Cancer: A Case Report

Pathology Section

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INTRODUCTION

Endometriosis is defined as the presence of endometrial tissue outside the uterus, which causes a range of symptoms which include infertility, pelvic pain, dysmenorrhoea and constipation. The natural history of endometriosis is uncertain. In addition, its aetiology remains unknown, its clinical presentation is inconsistent, its diagnosis is difficult and its treatment has been poorly standardized. Mechanical, hormonal, immunological, environmental and genetic factors have been implicated in its aetiology, but they have provided only inconclusive explanations. The benign disease causes peritoneal inflammation, fibrosis, adhesions and ovarian cysts, but it displays the features of malignancy such as neo-vascularization, local invasion and distant metastasis. The implantation and the proliferation of the endometrial glands outside the uterus affect 8% to 15% of the women of child bearing ages [1]. An intestinal involvement is common, and it is reported in 5% to 15% of the individuals with this disease. The sites which are most often affected are the sigmoid colon and the rectum [2]. The incidence of endometriosis with mucosal involvement, as has been illustrated in this case, appears to be rare (2.5%–7%). Whole small bowel involvement is seen less frequently and it is confined to the distal ileum. The caecum (3.6%) and the appendix (3%) are the sites which are the least affected.

The differential diagnosis of colonic endometriosis from other diseases of the colon is rather difficult, due to the lack of patho-gnomonic symptoms and the poor diagnostic yield of colonoscopy and colonic biopsies. In this manuscript, we are presenting the case of a young woman with intestinal endometriosis, in which the initial diagnostic workup suggested colon cancer.

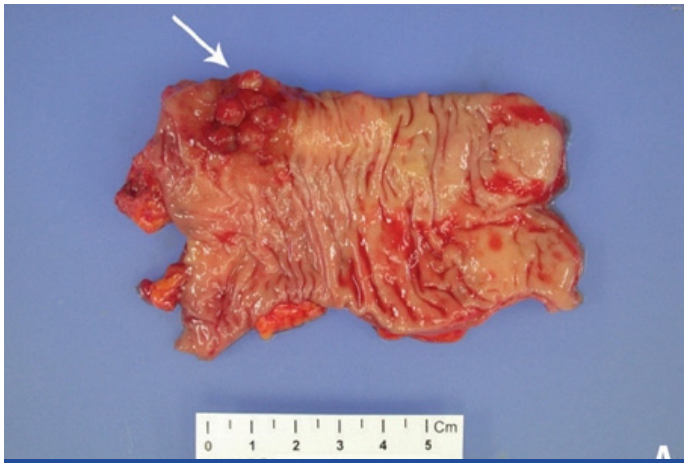
CASE PRESENTATION

A 35-year-old woman was admitted to the Surgical Department with rectal bleeding and bouts of abdominal pain. 9 months before her admission, the patient had begun to have rectal bleeding, that was related at first, to her menstrual cycles. She also reported episodes of severe lower abdominal pain that were irrelevant to her menses and were accompanied by abdominal distention and constipation, especially during the last 2 months. 3 weeks before her admission, she had started to almost daily have haematochezia and small-caliber stools. The patient had her menarche at the age of 13 years. Thereafter, she had 27-day to 28-day menstrual cycles and menstrual periods which lasted for 6 to 7 days, with normal blood loss. She also reported cramping in her lower abdominal pain, which accompanied her menstruation during the last 3 years.

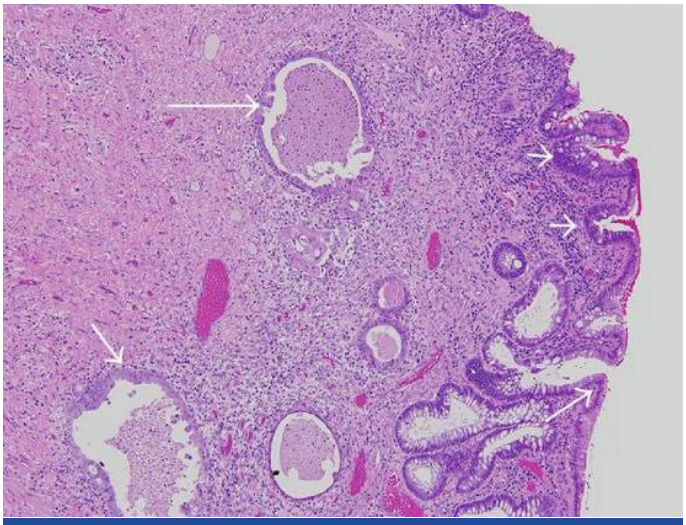
Her physical examination revealed mild lower abdominal tend-erness. No masses were palpated. The bowel sounds were slightly increased. Her rectal examination showed bright red blood, but no distinct mass. On her gynaecological examination, her vulva, vagina and cervix appeared to be normal. Her uterus was normal in size and was anteverted. The laboratory work-up revealed mild anaemia (Hb-11.3 gr/dL, Hct- 34.5%, MCV- 91.7 fL) with an increased white blood cell count (12000/µL: Neut: 80.8%, Lymph: 12.1%, Mono: 4.6%) and ESR: 36mm. The coagulation parameters, serum urea, creatinine, electrolytes and liver function tests, all were within the normal range.CEA and CA-19.9 were normal and CA-125 was consistently elevated.

Colonoscopy revealed an extensive polypoid lesion of the mucosa at the rectosigmoid junction, which infiltrated the wall of the sigmoid colon and partially occluded the lumen of the sigmoid colon, 19cm from the anal verge, along with erythema, oedema, and ulcerations that resulted in stenosis of the lumen. The endoscope could not be introduced beyond the lesion. A colonoscopic biopsy was done and the histology of the above lesion demonstrated a mild dilatation of the crypts without goblet cell depletion. The lamina propria was oedematous, with dilated capillaries and inflammatory infiltrates of lymphocytes and plasma cells. An abdominal CT scan which was obtained 2 days later, revealed an eccentric wall thickening of the sigmoid colon, which confirmed the filling defect. The clinical impression was that of a mass in the sigmoid colon. The patient was taken up for surgery to relieve the intestinal obstruction.

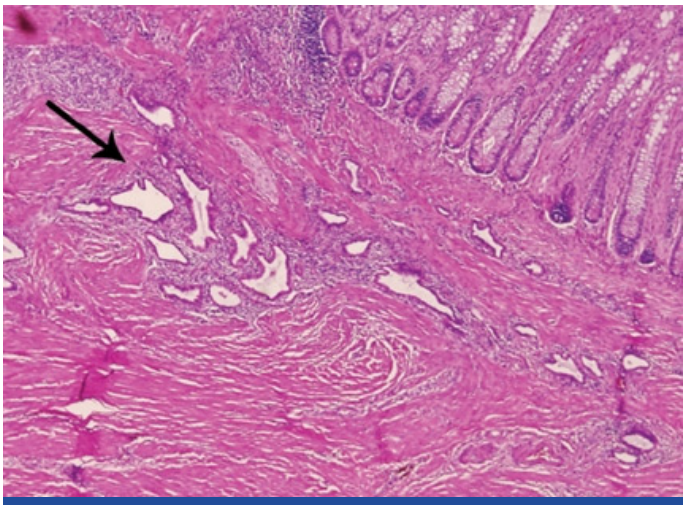
A segment of the sigmoid colon which measured 22 cms long was received in the pathology laboratory. The gross examination revealed a 30x20x15mm, hard, submucosal polypoidal mass with a wall thickening and the serous membrane was indented by the mass. The cut section appeared to be haemorrhagic [Table/Fig-1]. The colonic mucosa was ulcerated.



[Table/Fig-1]: Gross appearance



[Table/Fig-2]: Section shows ulcerated sigmoid mucosa with submucosal endometrial glands. (H&E, 100X)



[Table/Fig-3]: Section shows endometrial glands and stroma. (H&E,400X)

Multiple sections which were studied in the histopathology lab showed the colonic mucosa to have superficial mucosal ulceration [Table/Fig-2]. The lamina propria, the muscularis mucosa and the muscularis propria were infiltrated by bland looking glandular elements which were lined by epithelial cells, which had central nuclei and fine chromatin [Table/Fig-3]. A dense spindle cell stroma with partial decidualization was seen around the glands. A histopathological diagnosis of endometriosis of the sigmoid colon was made.

DISCUSSION

Intestinal endometriosis may present with rectal bleeding, bowel obstruction and rarely with perforation or malignant transformation [3]. The symptoms can be cyclical in about 40% of the patients, they can vary, depending on the site and they can include crampy abdominal pain, distention, diarrhoea, constipation, tenesmus and haematochezia [3,4]. The clinical, radiological and the endoscopic picture may be confused with neoplasms, ischaemic colitis, inflammatory bowel disease, post-radiation colitis, diverticular disease and infection. Usually the endoscopic appearance, even if there is mucosal involvement, is not diagnostic. Moreover, the endometriotic deposits can induce secondary mucosal changes which can mimic the findings of other diseases such as inflammatory bowel disease, ischaemic colitis, or even a neoplasm [5]. Recently, the CD10 (CALLA) expression in the normal endometrial stroma was found to aid in identifying the areas of endometriosis, especially when there was a paucity of glandular elements and/or when there was a background of chronic, active inflammation on histopathological examination. CT scan or barium enema usually demonstrates an extrinsic bowel compression, a stenosis or a filling defect. MRI seems to be the most sensitive imaging technique which can be used the diagnosis of intestinal endometriosis [6,7]. Yet, the gold standard for its diagnosis is laparoscopy or laparotomy.

The treatment options include surgery or hormonal manipulations, depending on the patient's age and on her desire to maintain fertility and also on the severity and the complications of the disease [8]. Recently, the laparoscopic treatment of colorectal endometriosis, even in its advanced stages, has been proven to be feasible and effective in nearly all the patients [9]. The medications which are used in the treatment of endometriosis are danazol, high dose progestins and GnRH agonists with almost equivalent efficacies [10]. The choice of which to use is based on the side effects and the costs. The frequency of malignant transformation is estimated to be up to 1%, with endometrial carcinoma being the most prevalent pathologic type (40%) [11]. There is an association with unopposed oestrogen stimulation and malignant transformation to generally a low-grade neoplasm with an 83% survival rate. The addition of progesterones may prevent this iatrogenic complication.

Our patient represented a case of symptomatic gastrointestinal endometriosis with mucosal involvement, without a previous history of pelvic endometriosis. The symptoms of abdominal pain, constipation and haematochezia and the presence of anaemia in combination with the radiologic and the endoscopic findings were suggestive of a neoplasm. On the other hand, the patient's long history of dysmenorrhoea, her normal levels of CEA and CA19-9, and the absence of neoplastic infiltration in all the biopsy specimens were against the diagnosis of colon cancer. Moreover, this patient had elevated serum levels of CA-125, which has been established as a useful marker for determining the severity of endometriosis [6,7].

The symptoms alone are thus not helpful for the diagnosis of endometriosis. Some reports have described a pre-operative confusion between this disease and cancer according to colonoscopy and CT with barium enema, particularly in patients with mucosal involvement, where only a post-operative histopathology had established the diagnosis of endometriosis. This disease should always be considered in the differential diagnosis for the women of child bearing ages, who present with gastro-intestinal tract symptoms, as the conditions basically involve a benign lesion which requires minimally invasive treatment.

In conclusion, intestinal endometriosis is often a diagnostic challenge which mimicks a broad spectrum of diseases and it should be considered in any young woman with symptoms in the lower gastrointestinal tract.

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