

# Bowel obstruction due to endometriosis in the rectovaginal septum

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## Summary

It is very rare that endometriotic lesions in the rectovaginal septum cause ileus. We report a case of bowel obstruction due to endometriotic lesions in the rectovaginal septum in a 22-year-old woman whose barium enema presented with apple-core-like findings. Diagnostic and treatment modalities were discussed. Preoperative and postoperative gonadotropin-releasing hormone analog and aromatase inhibitor therapy promote relief of clinical symptoms, a reduction of tumor volume and a better approach to radical surgery.

*Key words:* Endometriosis; Rectovaginal septum; Bowel obstruction.

## Introduction

Endometriosis is classified into three types: peritoneal, ovarian, and rectovaginal [1]. Rectovaginal endometriosis (RVE) is the deepest and most serious type, causing obstinate, severe dysmenorrhea, dyspareunia, and chronic pelvic pain. Histologically, RVE is considered a specific entity of deep endometriosis. Deeply infiltrating endometriosis is a particular form of endometriosis that penetrates > 5 mm under the peritoneal surface and is typically associated with marked proliferation of smooth muscle cells and fibrosis, and strongly associated with pelvic pain [2]. The etiology of endometriosis is still a matter of debate. The notion that rectovaginal endometriosis and peritoneal endometriosis are two distinct entities was first proposed by Donnez *et al.* [3]. Recent evidence indicates that endometriotic nodules, being anchored to the cervix, may originate from the rectovaginal space, as reported by Donnez and Squifflet [4], whereas Koninckx and Martin [5] have suggested that endometriotic nodules localized in the rectovaginal space are a severe form of deep endometriosis, resulting from the natural evolution of peritoneal endometriosis.

Endometriosis infiltrating the posterior vaginal and anterior rectal walls usually causes severe symptoms, and studies of the treatment of this particular form have focused primarily on pain relief [6], whereas information regarding the ileus is scattered and scanty. We present a rare case of endometriosis of the rectovaginal septum that caused rectal obstruction.

## Case Report

A 22-year-old Japanese woman (gravida 0) presented in the emergency outpatient department with increasing abdominal discomfort and nausea that she had begun to notice five months earlier. Her past medical and surgical history was uneventful. An abdominal X-ray showed an ileus due to obstruction of the

upper part of the rectum. The apple-core-like finding was confirmed by a barium enema (Figure 1). At rectoscopy, the rectal mucosa appeared regular and normal, but indirect signs of external rectal compression with negative biopsies were shown. Magnetic resonance imaging (MRI) was performed and revealed a T2WI high signal and a T1WI iso-signal in the rectovaginal space. Because her ileus occurred at the beginning of her menstruation and MRI findings, she was admitted to our gynecologic department. A bimanual and rectovaginal examination was performed on the patient. She had a 70 x 40 mm, painful nodule involving the upper portion of the rectovaginal septum. The uterus was fairly mobile, and no adnexal mass was palpated. A red papillary lesion at the posterior fornix histologically consistent with vaginal endometriosis was present. The serum concentration of the tumor marker CA125 was 280 U/ml whereas the serum concentrations of CA19-9 and CA 72-4 were within the normal range. Diagnostic laparoscopy was carried out and showed that the uterus, ovaries, pelvic organs, and peritoneum were macroscopically normal. After three courses of leuprolide treatment (at a dose of 3.75 mg/ four weeks), the tumor volume had decreased in size by approximately 70%. The CA125 level dropped to 10 U/ml after treatment. Low-anterior rectal resection was performed with immediate end-to-end anastomosis. The pathological diagnosis was endometriosis in the rectovaginal space. The patient's postoperative course was uneventful. She received an additional three courses of leuprolide therapy postoperatively, followed by adjuvant anastrozole therapy (at a dose of 1 mg daily) for 17 months. Subsequent examination revealed no evidence of disease recurrence and minor anal stenosis. No additional bowel or urinary complications were observed. At the time of her last follow-up, eight months after stopping anastrozole therapy, the patient was without evidence of disease recurrence.

## Discussion

When a bowel obstruction is diagnosed, endometriosis can be suspected when gynecological symptoms such as dyspareunia, infertility, or dysmenorrhea are present. Similarly, bowel symptoms should be looked for when genital endometriosis is diagnosed [7]. When an obstructive syndrome is present, or in cases of symptomatic

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Figure 1. — Image of the barium enema. The apple-core-like finding was confirmed.

advanced endometriosis (defined as reactionary fibrosis invading the muscularis of the intestine), the only treatment is surgical resection. Surgery is the only viable option because endometriotic tissue in the bowel muscularis undergoes muscle cell hyperplasia and fibrosis, which are resistant to medical treatment. Approximately 10% of women with intestinal endometriosis initially develop symptoms after menopause or after bilateral oophorectomy [7], which is why surgical castration (ovariectomy or bilateral salpingo-oophorectomy) is not part of the treatment for intestinal endometriosis.

Excising rectovaginal endometriosis is a technically challenging process. Almost all the methods involve separating the adherent rectum from the back of the vagina and cervix and dissecting down into the rectovaginal septum. As this is done, the disease can be left on the side of the rectum to be stripped off after the dissection [8] or can be left on the vaginal side of the septum and excised vaginally [9]. Where deeper involvement of the rectal muscularis or mucosa occurs, it is necessary to excise a full-thickness part of the rectum. This can be done by excising a disc of rectal wall [10] or by performing an anterior segmental rectal resection.

Heilier *et al.* [11] have shown a significantly different expression of aromatase in the peritoneal and ovarian endometriotic tissues and deep endometriotic nodules of the rectovaginal septum, which strengthens the theory of three distinct clinical entities. In addition, it was demonstrated that deep endometriotic lesions do not respond to progestin treatment as much as endometrium and superficial endometriotic lesions, suggesting a difference in the susceptibility of deep lesions [12]. Recently, aromatase

inhibitors have been proposed for the treatment of endometriosis; pilot studies have combined type II aromatase inhibitors (anastrozole and letrozole) with progesterone, progestins, or oral contraceptive pills [13, 14]. These studies have suggested that aromatase inhibitors not only reduce pain symptoms but also eradicate the disease either as an alternative to surgery [13] or as a postoperative prevention of recurrence [15].

In conclusion, although rare, endometriosis in the rectovaginal septum should be considered in a patient with rectal obstruction who presents with ileus.

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