

Research Letter

Rectal endometriosis mimicking neoplasm

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In September 2011, a previous healthy 39-year-old woman visited our hospital complaining of a 5-month history of change in bowel movement with constipation and tenesmus. Fecal occult blood test (immune) was positive (>800 ng/mL). Barium enema showed an apple-core lesion over the upper rectum (Fig. 1). Because neoplasm of the rectum was believed to be present, the patient was admitted to our hospital for further management. Colonoscopy revealed segmental narrowing of the rectum with villous appearance of mucosa (Fig. 2). Although biopsies revealed unspecific inflammatory colitis, malignancy could not be ruled out. The findings on enhanced abdominal computed tomography (CT) were compatible with those of colonoscopy (Fig. 3). Thickening of the rectal wall with a narrowing of the lumen was observed.

The patient underwent an exploratory laparotomy. During mobilization of the uterus, we found that the posterior wall of the uterus was firmly attached to the stenotic rectum. It was also difficult to dissect the rectovaginal septum because of severe scarring and inflammatory reactions. Low anterior resection was performed. An end-to-end anastomosis was created, with circular stapling using a double-stapled technique. There was no mucosal lesion, but segmental thickening of the upper rectal wall with stenosis of the lumen was present (Fig. 4). Pathologic examination of the specimen revealed endometriosis of the rectum (Fig. 5). The postoperative period has been eventful.

Endometriosis with intestinal involvement is rare. Intestinal endometriosis may affect the ileum, appendix, sigmoid colon, and rectum and is more frequently located in the rectosigmoid (50–90%) [1,2]. There are two major theories to explain the pathogenesis of endometriosis. The most accepted theory is that of retrograde menstruation, which explains the presence

of peritoneal endotriotic foci [3,4]. Another theory, called coelomic metaplasia, implies that any epithelium could be transformed to endometrium, which better explains the occasional presence of endometriosis outside the peritoneal cavity [3,4]. Endometrium may be found in every layer of the bowel but it is most commonly found within the subserosa as superficial serosal implants [5,6]. Transmural bowel wall involvement is uncommon and the intestinal mucosa usually remains intact [2].

Clinical symptoms of intestinal endometriosis are related to the site and the extent of bowel implants. The implants can be single and discrete, or multifocal and diffuse. The lesion could also be superficial, localized to the bowel serosa, or it could invade the subserosa and the muscularis propria, causing bowel-wall thickening due to fibrosis. Endometriosis of the intestine could be asymptomatic or it might present with diffuse abdominal pain, bloating, constipation, diarrhea, change in the form and caliber of stool, tenesmus, and intestinal obstruction [1,3,7,8]. In a large series of patients with endometriosis, the percentage of patients with intestinal endometriosis and obstruction was between 0.1% and 0.7% [9,10]. Only 40% of patients have cyclic symptoms, and the usual triad of dysmenorrhea, dyspareunia, and infertility is uncommon and mostly unrelated to the gastrointestinal symptoms [3,8]. Perforation of intestinal endometriosis is a rare complication [2]. As with other cases of intestinal endometriosis, our case has nonspecific gastrointestinal symptoms, including constipation and tenesmus, which were non-diagnostic for intestinal endometriosis.

The diagnosis of intestinal endometriosis is a great challenge because gastrointestinal symptoms are not specific. Radiologic and endoscopic examinations are essential for the diagnosis of intestinal endometriosis. It sometimes might be confused with malignancy, based on the results of colonoscopy and CT scan, particularly in patients with mucosal involvement [3,8,11,12]. Some authors suggest that magnetic resonance imaging could be the most sensitive imaging technique

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Fig. 1. Double contrast barium enema showing an apple-core lesion over the upper rectum (arrow).

for intestinal endometriosis [11,13]. However, these evaluations are not diagnostic [11]. If the diagnosis of pelvic or bowel endometriosis has already been made, transrectal ultrasound could help localize endometriosis foci on the intestinal wall, with a sensitivity of nearly 100% [3]. In our case, the transmural rectal endometriosis was not diagnosed pre-operatively, although barium enema, colonoscopy, and CT had been performed. A typical apple-core lesion over the upper

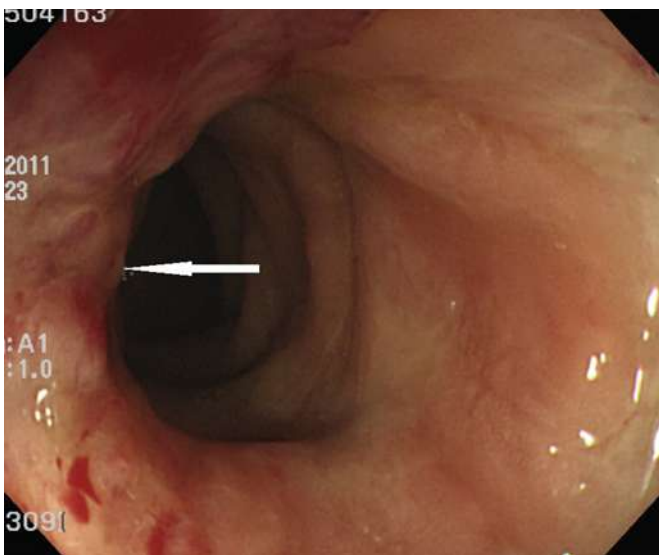


Fig. 2. Colonoscopy showing tubulovillous appearance of rectal mucosa (arrow).



Fig. 3. Computed tomographic image showing segmental thickening with narrowing of the rectal lumen (arrow).

rectum was seen with barium enema. These studies cannot differentiate neoplasm from endometriosis in our case.

The treatment choice is based mainly on the extent of intestinal involvement; however, the optimal treatment is not yet established. Surgical intervention is necessary only in 5% of patients with endometriosis [3,5]. Intestinal resection is indicated when the symptoms are recurrent or disabling, when intestinal obstruction is present, or when it is impossible to differentiate between endometriosis and a neoplasm of the bowel [3,5]. Most authors agree that planned bowel resection should be carried out if endometriosis involves more than 50% of the bowel circumference and in cases of multiple nodules or for nodules greater than 3 cm [1,14].

Endometriosis of the bowel is extremely difficult to diagnose clinically, because it usually mimics other entities such



Fig. 4. Gross specimen of the rectal endometriosis with annular wall thickening and narrowing.

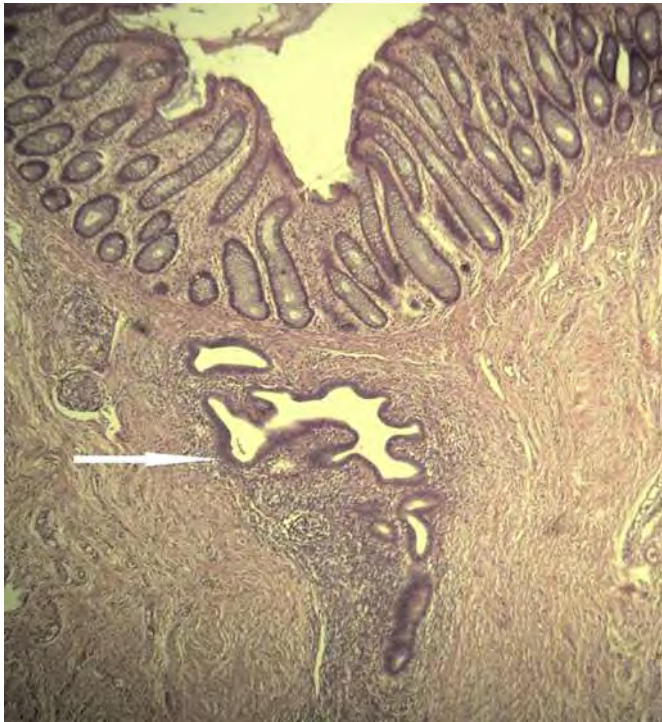


Fig. 5. Rectal wall composed of stroma and glands of endometrium (arrow), upon microscopic analysis (hematoxylin and eosin, 100 \times).

as colorectal neoplasm or intestinal obstruction when based on clinical symptoms, endoscopic procedure, and radiologic findings. According to the literature and our case, it cannot be neglected to consider intestinal endometriosis in reproductive women presenting with gastrointestinal symptoms and an intestinal mass of unknown origin.

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