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Colonic obstruction due to rectal endometriosis: Report of a case

Rektal endometriozise bağlı gelişen kolon tıkanıklığı: Olgu sunumu

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Although endometriosis is a common disease in women of childbearing age, intestinal endometriosis is unusual and may cause clinically significant complications. We report a 46-year-old woman with rectal endometriosis who presented with intestinal obstruction. She was operated on with a preoperative diagnosis of malignancy. The diagnosis of endometriosis was made only after histological examination of the resected specimen. Intestinal endometriosis has a diverse clinical spectrum, with nonspecific features in many patients. In female patients who have unexplained digestive complaints, endometriosis should also be considered in the differential diagnosis.

Key words: Intestinal obstruction, rectum, endometriosis

Endometriozis, doğurganlık çağındaki kadınlarda sık görülen bir hastalık olmasına rağmen, intestinal endometriozis oldukça nadir görülen ve ciddi klinik sorunlara yol açabilen bir hastalıktır. Bu yazıda, rektuma yerleşmiş intestinal endometriozis nedeniyle kalın barsak tıkanıklığı ile başvuran 46 yaşında bayan hasta tartışılmıştır. Hastada rektal endometriozis tanısı barsak rezeksiyonundan sonra spesmenin histopatolojik tetkiki sonucunda konulmuştur. İntestinal endometriozis bir çok hastada spesifik olmayan bulgu ve semptomlara neden olmaktadır. Sebebi açıklanamayan sindirim sistemi sorunları olan bayan hastaların ayırıcı tanısında intestinal endometriozis olabileceği akılda tutulmalıdır.

Anahtar kelimeler: Barsak tıkanıklığı, rektum, endometriozis

INTRODUCTION

Endometriosis was first defined in 1860 by von Rokitansky as the presence of functioning endometrial glands and stroma outside the uterine cavity (1). While ectopic endometrial tissues are frequently observed on the surfaces of the uterus and adnexa, they might rarely be observed on the serosal surfaces of bowel and laparotomy incisions, in the lungs, in bones and in the urinary tract (1, 2). Extra-pelvic endometriosis is most frequently seen in bowels, which is usually asymptomatic. However, bowel endometriosis might show non-specific symptoms such as abdominal colic-like pain, nausea, vomiting, constipation, diarrhea and rectal bleeding. We present a case of rectal endometriosis diagnosed only after the operation for intestinal obstruction.

CASE REPORT

A 46-year-old multiparous Caucasian woman was admitted to the emergency service with a history of vomiting and colicky abdominal pain for three days. She had had similar attacks in the previous month, which were relieved by medication and rectal enema (monobasic and dibasic sodium phosphate). She was otherwise healthy and had no gynecologic problem. On physical examination, she was dehydrated and had a distended, painful abdomen. Bowel sounds were hyperactive, and there was no mass on palpation. Rectum was empty on digital examination. Hemoglobin concentration was 9.6 g/dl and white blood cell count was slightly elevated (12300/mm^3). Plain abdominal X-ray suggested colonic obstruction with distended loops of small and large bowel. Flexible sigmoidoscopy was performed, and intraluminal nar-

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rowing and minimal mucosal hyperemia were detected at the rectosigmoid junction. Multiple endoscopic biopsies were taken. Histopathologic examination of biopsy specimens revealed nonspecific changes. Abdominal computerized tomography (CT) was performed and a mass was seen at the rectosigmoid junction (Figure 1). An exploratory laparotomy was done and the obstructing lesion was identified at the rectosigmoid junction. As rectal cancer could not be ruled out at operation, a low anterior resection with total mesorectal excision and Hartmann procedure was performed. Macroscopically, the mucosa of the resected specimen was intact. The rectum was surrounded circumferentially by a 3x4x3 cm extraluminal fibrotic mass. Cut sections of specimen demonstrated near complete luminal obstruction at the site of the mass and numerous small hemorrhagic areas. Microscopic examination revealed that the rectal muscularis propia and submucosa included endometrial type glands and were surrounded by varying amounts of dense cellular, endometrial-type stroma. The diagnosis was endometriosis of the rectum (Figure 2a, 2b). She made an uneventful recovery and her colostomy was closed three months later.

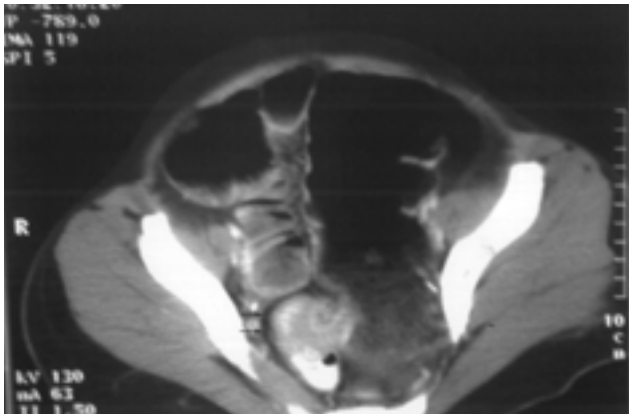

Figure 1. Contrast enhanced axial CT image shows annular mass at the rectosigmoid junction (arrows) and marked dilatation of proximal bowel segments

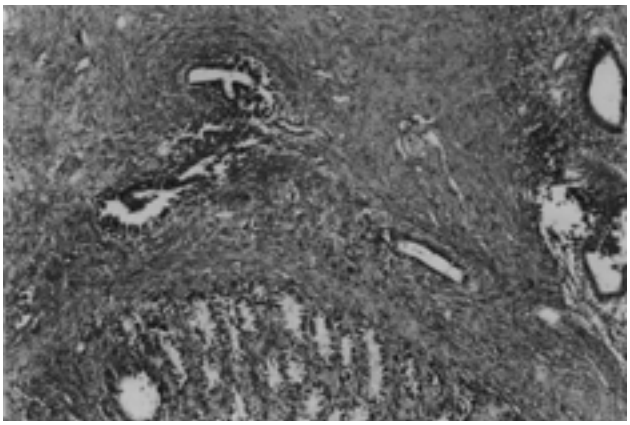

Figure 2: a) Endometrial glands existed within the muscularis propia and submucosa, but not within the mucosa (H&E x 100)

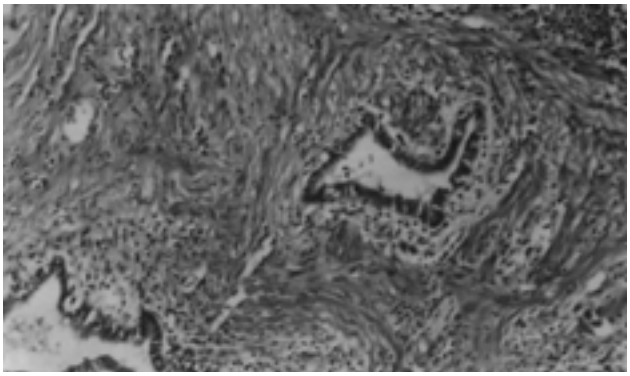

Figure 2: b) The appearance of endometrial glands in muscularis propia at higher magnification (H&E x 200)

DISCUSSION

Although the exact prevalence of endometriosis among pre-menopausal women is not known, it is assumed to be between 2% and 5% (1). Extra-genital endometriosis is seen mostly at the rectosigmoid junction, with less frequent observation at the rectovaginal septum, small intestine, cecum and appendix. 5% to 15% of the patients with pelvic endometriosis have bowel involvement (1-5).

While there have been a number of theories postulated to explain the origin and development of endometriosis, Samppson's theory of retrograde spread is the most commonly accepted. This theory maintains that endometrial cells flow backward through the fallopian tubes into the peritoneal cavity during menstruation, subsequently seeding various surfaces. Celomic metaplasia, vascular dissemination, and autoimmune disease are other proposed major theories (1, 6).

In intestinal endometriosis, ectopic endometrial tissue adheres to the peritoneum and bowel wall with the effect of the ovarian hormones, especially estrogen (2, 7). As a result of cyclic bleeding, sloughing and proliferation, inflammation and fibrosis are seen around the lesion (2). This progressing event can cause it to surround the bowel or grow into the lumen, leading to obstruction (2, 7-9).

Microscopic examination of the intestine involving endometriosis usually discloses an endometrial stroma and gland islands located between muscular fibers, subserosa and serosa. Normally, the mucosa is found to be intact, but in some cases, the endometrial tissue reaches it in the form of small islands, which cause rectal bleeding coincidental with the menstrual period (2, 10). In our case, although intestinal obstruction was present, no mucosal involvement could be demonstrated histopathologically. Endometrial glands formed of multifocally placed cuboidal epithelium and stroma spreading under the intestinal mucosa to the serosa were observed.

Out of 7200 cases of endometriosis presented by the Mayo Clinic, 38 cases of small intestine involvement were observed; however, small intestinal obstruction was reported in only 11 of the cases (11). In the series presented by Prystowsky and colleagues, gastrointestinal involvement was observed in 85 (5.4%) patients; intestinal resection was done in only 11 patients (0.7%) because of unremitting gastrointestinal symptoms (4 small, 5 large intestine involvement) (5). Graham et al. reported colon obstruction in only two patients among 32 cases of endometriosis with colon or rectum involvement (8). Similarly, Williams et al. noted only one intestinal obstruction case out of 178 patients with gastrointestinal involvement (3).

Intestinal endometriosis is usually asymptomatic, but gastrointestinal bleeding, nausea, vomiting, cramp-like abdominal pain, painful defecation, diarrhea, constipation, recto-vaginal colonic mass, intussusception, bowel obstructions and intestinal perforation can be seen (2, 8-12). It can also lead to massive exudative ascites and hemoperitoneum due to diffuse serosal and peritoneal involvement which may imitate carcinomatosis (13). In some rare instances, endometrial foci might show malignant transformation (14). The differential diagnosis encompasses a wide range of diseases including primary bowel carcinoma, diverticulosis, chronic inflammatory bowel disease, carcinoid tumor, benign intramural tumors, metastases from occult intraabdominal malignancies and pelvic and mesenteric tumors and cysts (7).

It is remarkably difficult to diagnose intestinal endometriosis by the pre-surgical radiological imaging methods. Rectosigmoid endometriosis usually manifests on double contrast barium enema studies as an extrinsic mass, flattening, tethering with spiculation of the anterior border of the rectosigmoid colon. Much less commonly, colonic disease may manifest as an annular lesion or as a polypoid intraluminal mass (7, 8, 15, 16). In our case, the lesion found in the recto-sigmoid area was of annular type, and endometriosis could be diagnosed neither preoperatively nor during the operation. Since endometriosis is located in the bowel wall or in muscle layer as implants, narrowing, spasm, discoloration, and hyperemia in the affected bowel wall can be seen through colonoscopy (8, 15). As the biopsies from the suspected area do not contain submucosa and muscle layers, they do not allow for diagnosis (15). Although it is possible with computerized tomography to determine the thickening of the bowel wall, a discrete mass and intestinal obstruction, it gives no clues about the histopathologic diagnosis. Recently devised methods such as endoscopic US and CT (virtual) colonoscopy can also be used in the diagnosis of endometriosis seen in the recto-sigmoid region (17-19).

The objective of the treatment in pelvic endometriosis is to cease the endometrial stimulus in order to ameliorate the symptoms. Thus, danozol, gonadotropin-releasing hormones, oral contraceptives, and prostaglandin inhibitors can be used. The conclusive treatment of endometriosis is total abdominal hysterectomy, bilateral salpingo-oophorectomy and removal of all endometrial foci. Because malignant transformation cannot be excluded preoperatively and medical treatment may cause fibrosis, the definitive treatment is surgical (1, 3, 7, 8, 15). Also, in the case of intestinal obstruction and severe rectal and abdominal pain, surgery is indicated. The main objective of surgery is the resection of the affected bowel segment, enabling the histopathological examination of the resection material. Limited surgery, such as excision or cauterization of superficial lesions, following confirmation through frozen section analysis could be performed (7-9).

In conclusion, intestinal endometriosis is a disease that may imitate various gastrointestinal system diseases. The definite diagnosis could only be done by histopathologic confirmation, since there are no pathognomonic radiological or colonoscopic findings. In female patients who have unexplained digestive complaints, endometriosis should also be considered in the differential diagnosis.

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