CASE REPORT / OLGU SUNUMU

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A Rare Cause of Colonic Obstruction: Endometriosis

Kolon Tıkanıklığının Nadir Bir Nedeni: Endometriozis

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Abstract

Mechanical intestinal obstruction is a surgical emergency; colonic factors account for approximately one-fourth of cases. Endometriosis, characterized by the presence of endometrial tissue outside the uterine cavity, is an extremely rare cause of colonic obstruction. A 45-year-old woman presented with a two-month history of cramping lower abdominal pain, abdominal distension, constipation, and thin, ribbon-like stools. Computed tomography showed an obstructing mass in the sigmoid colon with mildly dilated intestinal loops. Colonoscopy revealed an impassable stricture with normal mucosa located approximately 30 cm from the anal verge. During the operation, a sigmoid resection with lymph node dissection was performed. Pathological examination revealed a submucosal mass infiltrating the serosa and narrowing the lumen. The lesion was composed of endometrial gland structures that were positively stained with CK7 and CD10, indicating deep infiltrating endometrioma. Given the non-specific clinical and imaging features, endometriosis should be considered in the differential diagnosis of colonic obstruction, particularly in women of childbearing age, with or without a history of gynecological surgery.

Keywords: Colon, endometriosis, obstruction

Öz

Mekanik barsak tıkanıklığı, acil cerrahi girişim gerektiren bir durum olup olguların yaklaşık dörtte birini kolonik etkenler oluşturmaktadır. Uterus dışında endometrial dokunun varlığı ile karakterize endometriozis, kolon tıkanıklığının son derece nadir bir nedenidir. Kırk beş yaşında bir kadın, iki aydır kramp şeklinde alt karın ağrısı, şişkinlik, kabızlık ve ince dışkılama şikayetleriyle başvurdu. Bilgisayarlı tomografi, sigmoid kolonda hafif genişlemiş barsak ansları ile birlikte tıkayıcı bir kitleyi gösterdi. Kolonoskopi, anal verjden yaklaşık 30 cm uzaklıkta, normal mukozaya sahip, geçilemeyen bir darlık ortaya koydu. Ameliyatta, lenf nodu diseksiyonu ile birlikte sigmoid rezeksiyon yapıldı. Patoloji, serozayı infiltre eden ve lümeni daraltan submukozal bir kitleyi gösterdi. Lezyon, CK7 ve CD10 ile pozitif boyanan endometrial bez yapılarından oluşmaktaydı ve bu da derin infiltratif endometriomayı işaret etti. Spesifik olmayan klinik ve görüntüleme bulguları göz önüne alındığında, özellikle doğurganlık çağındaki kadınlarda jinekolojik ameliyat öyküsü olsun veya olmasın, kolon tıkanıklığının ayırıcı tanısında endometriozis de dikkate alınmalıdır.

Anahtar Kelimeler: Kalın barsak, endometriozis, tıkanıklık

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Introduction

Mechanical intestinal obstruction is a surgical emergency, and colonic factors account for approximately one-fourth of all cases (1). Cancer, volvulus, and diverticular disease are the most common causes of colonic obstruction, while other, less frequent causes include Crohn's disease, hernia, intussusception, adhesions, and endometriosis (1,2).

Endometriosis is characterized by the presence of endometrial tissue outside the uterine cavity and affects 10% of women of reproductive age. Although the exact has not been clearly demonstrated, transplantation of endometrial cells to peritoneal surfaces resulting from retrograde menstruation is the most widely accepted theory. It is mostly occurred in the pelvic region, whereas intestinal involvement is responsible for up to 12% of the cases (3). Although rare, rectum and sigmoid colon are likely to most common locations of intestinal endometriosis (4). Patients with colonic endometriosis are often asymptomatic or have mild, cyclical symptoms such as abdominal discomfort, constipation, and rectal bleeding. On the other hand, mechanical obstruction is a rare clinical presentation of colonic endometriosis, with few cases reported in the literature (2,4-6).

We present a case of colonic obstruction caused by sigmoid endometriosis presenting as the first clinical manifestation in a patient with no previous gynecological symptoms.

Case Presentation

A 45-year-old woman presented with cramping lower abdominal pain, constipation, and narrow, ribbon-like stools for two months. She was hemodynamically stable, had no history of chronic disease or abdominal or gynecological surgery, and reported a regular menstrual cycle. Physical examination revealed minimal distension and mild tenderness in the lower left abdomen, without signs of peritonism. The rectal examination was normal. Laboratory tests were all within normal limits. Ultrasonography showed normal-appearing abdominal and pelvic organs. On computed tomography, an obstructing mass in the midportion of the sigmoid colon was identified, with mildly dilated intestinal loops. No distant metastatic lesions or mesenteric lymph node metastases were observed (Figure 1). Colonoscopy revealed an impassable stricture with normal mucosa located approximately 30 cm from the anal verge (Figure 2). A biopsy was not taken because of the risk of perforation and because the mucosa was intact. During the operation, a firm, ill-defined mass was detected in the mid-sigmoid colon, invading the serosa and causing near-complete luminal obstruction. No peritoneal or visceral disease was visualised. A sigmoidectomy with lymph node dissection was performed. The patient was discharged on postoperative day 8 without complications. On pathological examination, a whitish submucosal lesion 3 cm in diameter, infiltrating the serosa and narrowing the lumen, was detected. Histopathology showed that the endometriotic lesion extended from the serosal surface to the lamina propria (Figure 3A). Surgical margins were intact, and the removed lymph nodes were all reactive. Immunohistochemically, both glands and stroma showed positive staining for estrogen (Figure 3B) and progesterone, and negative staining for CDX2 and carcinoembryonic antigen. Endometrial stroma and glandular structures were also positively stained with CD10 (Figure 3C) and CK7, respectively. Based on these findings, the lesion was diagnosed as deep infiltrating endometriosis. During the two-year follow-up, the patient was asymptomatic and recurrence-free. Written informed consent was obtained from the patient for publication of this case report and accompanying images.

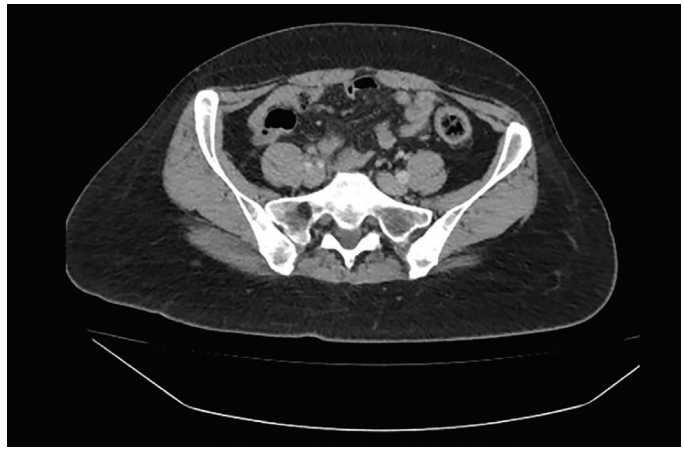

Figure 1. Tomographic view of the obstructing mass in the sigmoid colon

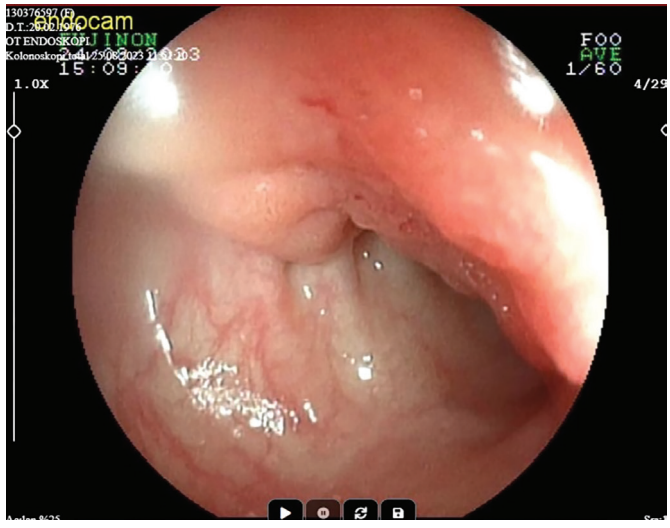

Figure 2. Colonoscopic view of the tight and non-passable stricture with normal mucosa, located approximately 30 cm from the anal verge

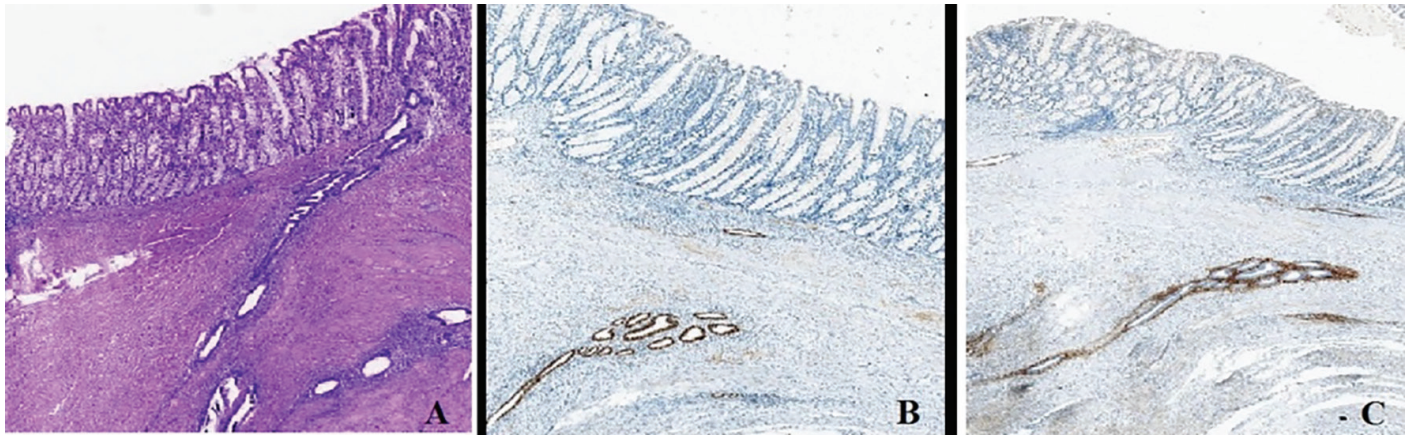

Figure 3. (A) Hemotoxilen-eosine stained colonic samples: endometriotic lesion extending from the serosa to the lamina propria (×40). (B) Estrogen-positive nuclear staining in endometrial glands (×40). (C) CD10-positive staining in endometrial stromal cells (×40)

Discussion

Endometriosis is classically categorized as superficial, peritoneal, and deep disease. Deep infiltrating endometriosis refers to the involvement of the muscularis layer or mucosa of the organ. It is more severe than superficial disease and is observed in up to 20% of patients with endometriosis. Intestinal system is the most frequently affected localization of extragenital endometriosis, among which rectum and sigmoid colon were involved more often, probably due to the proximity to the uterus (3). The clinical presentation is based on the location and depth of the lesions. Superficial lesions are usually asymptomatic or cause mild symptoms whereas infiltrative deep endometriotic lesions can lead to severe situations such as complete bowel obstruction or gastrointestinal bleeding (7). The patients with colonic endometriosis may experience a range of gastrointestinal symptoms including bloating, constipation, diarrhea, rectal bleeding, which may intensify with the menstrual cycle (8). However, a significant portion of these patients suffers from non-cyclical signs and symptoms, which poses a diagnostic challenge for physicians. Similarly, our patient had non-specific gastrointestinal symptoms not associated with her menstrual cycle. For this reason, she was misdiagnosed with irritable bowel syndrome for several weeks, until the lesion caused nearly complete obstruction.

Imaging methods, including ultrasonography and computed tomography, may be helpful for the diagnosis of colonic endometriosis, but often fail to reveal specific findings. In the present case, sonography was normal, whereas tomography showed wall thickening of the sigmoid colon, suspicious for malignancy. Endorectal ultrasonography, on the other hand, has been shown to demonstrate high sensitivity and specificity (6). The facts that it is not available in all medical centers and that it requires extensive experience are the most important factors limiting its accessibility. Colonoscopy should be included in the diagnostic workup except in urgent surgical situations because it may help establish a differential diagnosis, particularly to rule out malignancy.

Therapeutic approaches of intestinal endometriosis can be classified as medical and surgical, but have main principles including complete removal of the lesion, eliminating the pain, preserving fertility, and avoiding recurrence (7). However, there are no globally accepted treatment guidelines, and management is largely individualized. Hormonal therapy has limited effectiveness in symptomatic intestinal endometriosis, particularly in the presence of luminal obstruction. In addition, hormonal therapy has a risk of persistence of symptoms when medication is discontinued (9). Therefore, surgical resection is accepted as the most frequent therapeutic option, especially for patients with colonic obstruction and recurrent rectal bleeding. Although extremely rare, malignant transformation is an important complication of intestinal endometriosis and warrants prioritization of surgical treatment with clear margins. It should be noted here that hormonal therapy after surgery has been shown to reduce the recurrence rate (10). In our case, a complete resection with adequate lymphatic dissection was performed because of suspicion of cancer.

Endometriosis should be considered the differential diagnosis of colonic obstruction, particularly in women of childbearing age with or without a history of endometriosis or gynecological symptoms. A high clinical suspicion is essential to achieve an accurate diagnosis of intestinal endometriosis because of the non-specific clinical and imaging features.

Ethics

Informed Consent: Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Footnotes

Authorship Contributions

Concept/Design: M.Ö.K., Data Collection or Processing: M.Ö.K., O.K., M.F.Ç., Analysis or Interpretation: M.Ö.K., O.K., M.F.Ç., M.S.A., Literature Review: M.Ö.K., M.F.Ç., Writing, Reviewing and Editing: M.Ö.K., O.K., M.F.Ç., M.S.A.

Conflict of Interest: No conflict of interest was declared by the authors.

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