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CASE REPORT

A rare cause of acute appendicitis: Endometriosis

Nadir bir akut apandisit nedeni: Endometriozis

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ABSTRACT • Endometriosis is an uncommon cause of acute appendicitis, with nonspecific clinical, laboratory, and radiological features. Definitive diagnosis is based on the histopathological examination of the appendectomy specimens. Endometriosis should be considered as a possible cause of acute appendicitis, particularly in women of childbearing age. Here, a rare case of acute appendicitis secondary to appendiceal endometriosis in a 45-year-old woman is presented.

Keywords: Acute appendicitis, endometriosis, diagnosis, treatment

ÖZET • Endometriozis, spesifik olmayan klinik, laboratuvar ve radyolojik özelliklere sahip nadir görülen bir akut apandisit nedenidir. Kesin tanı, apandektomi örneklerinin histopatolojik incelemesine dayanır. Endometriozis, özellikle doğurganlık çağındaki kadınlarda akut apendisitin olası bir nedeni olarak düşünülmelidir. Burada, 45 yaşında bir kadında apandiks endometriozisine bağlı nadir bir akut apandisit vakası bildirilmektedir.

Anahtar kelimeler: Akut apandisit, endometriozis, tanı, tedavi

INTRODUCTION

Acute appendicitis (AA) is the most common cause of acute abdominal pain requiring emergency surgery. Obstruction of the appendiceal lumen due to several conditions such as fecaliths, foreign bodies, parasites, lymphoid hyperplasia, and tumors is the most important causal factor in the pathogenesis (1). However, endometriosis, which is defined as the presence of endometrial tissue outside the uterus and affects up to 10% of women of childbearing age, is an unusual cause of AA (2). Here, we report a rare case of AA secondary to appendiceal endometriosis (AE).

CASE REPORT

A 45-year-old woman, without any significant medical comorbidities, admitted to emergency room with abdominal pain in her right iliac fossa for two days. Physical examination revealed rebound tenderness at McBurney's point. Laboratory tests were within normal limits, except C-reactive protein (20.7 mg/L). Abdominal ultrasonography showed 7 mm tubular structure with an edematous wall in the right lower quadrant. Computed tomography demonstrated an enlarged appendix measuring 8 mm in thickness and minimal periappendicular free fluid (Figure 1). A laparoscopic

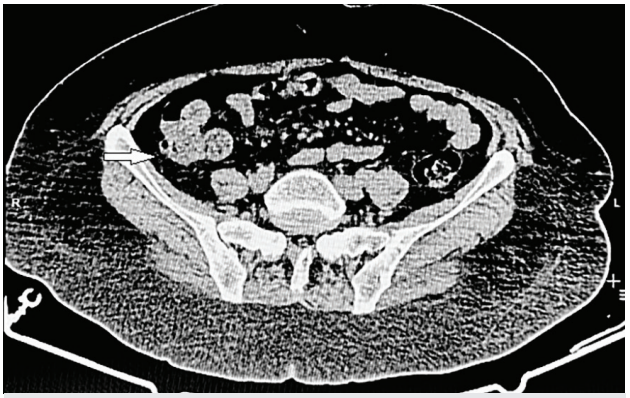

Figure 1 Tomographic view of the enlarged appendix with a thickness wall (arrow).

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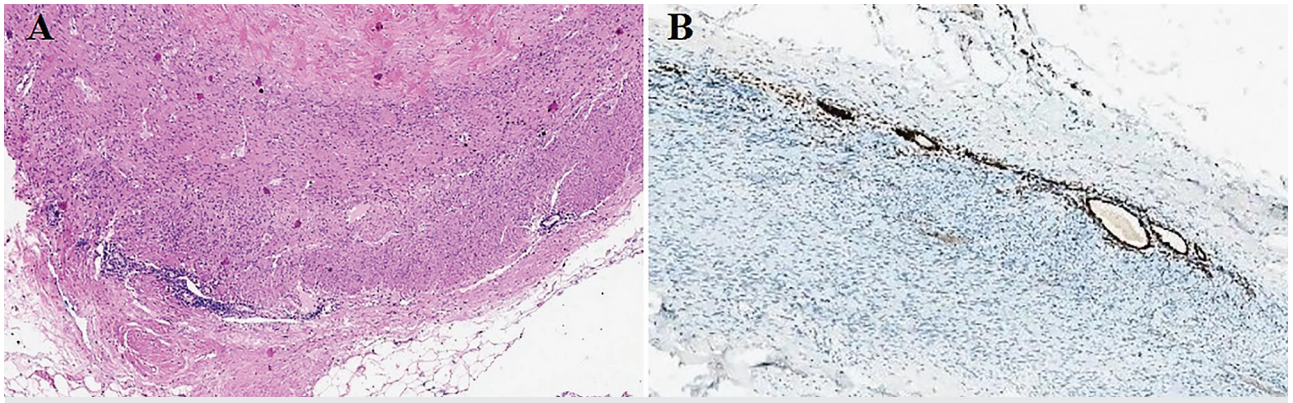

Figure 2 **(A)** Benign endometrial glands with surrounding endometrial stroma in the muscularis propria of the appendix (H&E×40), **(B)** Strong positive staining of estrogen receptor in benign endometrial glandular epithelium and surrounding stroma.

appendectomy was successfully performed. The patient was discharged on postoperative day one, without any problem.

On gross examination, a whitish firm lesion, 10 mm in diameter, was detected in the tip of the appendix. Histopathology revealed acute inflammation with ectopic endometrial stroma within the muscularis propria and serosa of the appendix, indicating the diagnosis of AA secondary to endometriosis (Figure 2A-B).

DISCUSSION

Among all locations of endometriosis within the abdominal cavity, appendix is the least frequently affected site with a prevalence of 0.4% (3). Although exact pathogenesis has not been clearly demonstrated, several theories such as ectopic transplantation from the fallopian tube or retrograde menstruation of endometrial tissue into the pelvis have been widely accepted (4). The patients with AE can be categorized based on the clinical presentations; those with AA, those with atypical symptoms such as abdominal mass, intussepsion, intestinal bleeding, obstruction and perforation, and asymptomatic cases (3,5). Of these, AA caused by endometriosis is a rare clinical entity, most often reported as single case reports or small case series in the literature (2,3,6). In a recent study conducted on 2484 consecutive appendectomies, the incidence of AE was found to be 0.7% (7).

Unfortunately, AE does not have specific laboratory or imaging findings in the majority of cases. Laboratory tests may show leukocytosis and elevated C-reactive protein levels, while imaging methods often reveal classic findings of AA, such as thickening of the appendix wall, periapendicular heterogeneity or free fluid (5,6). Therefore, high clinical suspicion is crucial for the diagnosis of AE. History of endometriosis or some clinical signs such as abdominal pain related to menstrual cycle may help clinicians to the correct diagnosis. Our patient stated that her pain was not related to her menstrual cycle. The treatment is traditionally urgent laparotomy or laparoscopy, and generally depends on the intraoperative findings. Appendectomy is sufficient for uncomplicated appendicitis while more extensive surgical interventions, including right hemicolectomy, may be required for complicated cases such as the presence of a large mass or perforation. A standard laparoscopic appendectomy was sufficient in our patient.

In conclusion, endometriosis is an uncommon cause of AA, with nonspecific clinical, laboratory, and radiological features. Definitive diagnosis is always based on the histopathological examination of the appendectomy specimens. Endometriosis should be considered as a possible cause of AA, particularly in women of childbearing age.

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