Ureteral Endometriosis with Obstructive Uropathy

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Abstract

Endometriosis is a common disease, but ureteral involvement is rare. The symptoms and signs of ureteral endometriosis mimic those of ureteral malignancy. This case report describes a woman who presented with chronic back pain for 5 years. Imaging studies showed a right small contracted kidney with hydronephrosis and a bladder tumor. Endometriosis of the right lower ureter was ultimately diagnosed. The patient was healthy without recurrence during follow-up. It is difficult to differentiate between ureteral endometriosis and malignancy; in fact, renal loss may occur before diagnosis. Ureteral endometriosis should be considered for women with ureteral obstruction manifesting as chronic backache.

Key words: ureteral endometriosis, obstructive uropathy

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Introduction

Endometriosis is used to describe active endometrial tissue exterior to the uterine cavity (1). It occurs mostly in women of childbearing age, and its prevalence is about 10% in premenopausal women (2, 3). The most commonly involved organs include the ovaries, uterosacral ligaments, fallopian tubes, cervix, and cul-de-sac (4). Ureteral endometriosis is unusual and occurs in about 1% of patients with endometriosis, with a higher prevalence in women between the ages of 30 and 35 years (5, 6). The ratio of bladder-to-ureteral involvement is 8 : 1 (3).

Frequency, dysuria, urgency, cyclic hematuria, and renal colic are the common symptoms of urinary tract endometriosis (7). Other uncommon presentations of ureteral endometriosis include unilateral or bilateral ureteral obstruction, hypertension, anuria in a solitary kidney, and cyclical ureteral obstruction (8-10). Chronic backache secondary to ureteral endometriosis in middle-age women is rare. Herein, we describe a patient of silent renal loss due to ureteral endometriosis with obstructive uropathy manifesting as back pain.

Due to the rare incidence and absence of specific symptoms or radiological findings of ureteral endometriosis, this disease should be considered in the differential diagnosis of chronic backache.

Case Report

A 42-year-old woman was admitted due to progressive right flank pain and backache for 5 years. The pain was cyclic and dull in nature, and was not related to postural change. Initially, the patient only took acetaminophen from a local physician for suspected myofascial pain, and she did not pay much attention to the flank pain because it was tolerable. She had experienced dysuria and progressive right flank pain for the preceding 2 weeks prior to admission. She did not present with nausea, vomiting, low abdominal pain, urine frequency, urine urgency, or gross hematuria. This patient had undergone a hysterectomy for uterine myoma at age 32.

The patient was afebrile without hypertension (blood pressure: 101/50 mmHg) on admission and physical examination revealed right costo-vertebral angle tenderness. Urinary sediment did not contain hematuria or pyuria. The laboratory test revealed hemoglobin (13.4 g/dL) and a white cell count of 8,300/mm³. Serum electrolyte (sodium, potas-
The pathophysiology of endometriosis is still indistinct. The theory of direct extension has been proposed due to a higher incidence of endometriosis in patients with a history of pelvic surgeries, including hysterectomy (11, 12). In addition, nulliparous women and those with hormone replacement therapy were found to have a higher rate of endometriosis (9, 13). The present patient had both risk factors: nullipara and a history of previous hysterectomy.

Asymmetrical involvement of ureteral endometriosis has been found; a previous study reported that the left ureter seemed more commonly involved than the right ureter (14). The distal segment of the ureter is the most involved location, which is supposedly due to the close anatomical proximity of the distal ureter to the woman reproductive organs (11, 15). Ureteral endometriosis in the present patient involved the distal ureter, as observed in previous studies. Frequency, dysuria, urgency, and renal colic are the common symptoms of urinary tract endometriosis (7). However, these symptoms occur mostly in endometriosis of the urinary bladder but are seldom seen in patients with ureteral endometriosis. Hematuria occurs in about 15% of patients with ureteral endometriosis. Ureteral endometriosis is divided into two major pathological types—extrinsic and intrinsic—with the former being the most common (80%). In the extrinsic type, endometrial glandular and Stromal tissue involve only the adventitia of the ureter or surrounding connective tissues; the intrinsic type means endometrial tissue within the muscularis propria, lamina propria, or ureteral lumen (16). The present patient had the pathological finding of extrinsic type ureteral endometriosis. Cyclical hematuria is usually associated with the intrinsic type (17). Dyspareunia, dysmenorrhea, pelvic pain, and menorrhagia, which are usually seen in pelvic endometriosis, could also prompt a physician to suspect ureteral involvement (11). However, hematuria was absent in our patient. Dysmenorrhea, pelvic pain, and menorrhagia did not apply to our patient because she had undergone a hysterectomy. The diagnosis of ureteral endometriosis should be considered in a patient presenting...
Figure 2. Contrast abdominal CT showed a mass lesion in the bladder (arrow in 2A) with obstructive uropathy and hydronephrosis in the right small kidney (arrow in 2B). No lymphadenopathy or distant metastasis was observed in this study.

Figure 3. Islands of irregular and cystically dilated glands (arrow) among spindle cell-type stroma resembling endometrial stroma were seen in the lower right ureter (3A, Hematoxylin and Eosin staining, 40×). The glands were lined with flattened, cuboidal, or pseudostratified columnar epithelium (3B, Hematoxylin and Eosin staining, 100×).

with chronic backache even in the absence of hematuria or pelvic symptoms.

Numerous diagnostic tests helped confirm the existence of ureteral endometriosis. Pelvic ultrasound, intravenous pyelography, ureteroscopy with endoluminal ultrasound, laparoscopy, and computed tomography (CT) are common diagnostic tools (11, 18). However, preoperative diagnosis is difficult, and the final diagnosis requires demonstration of endometrial tissue on a pathology specimen.

The best treatment for urinary tract endometriosis is still contentious due to the low prevalence of the condition. Treatment is generally aimed to relieve symptoms and the ureteral obstruction, and to rescue the involved kidney. Treatment options for ureteral endometriosis include hormone therapy or various surgical approaches, or a combination of the two (1, 7, 19). Proposed surgical interventions for relief of obstructive uropathy caused by endometrial tissue include ureterolysis, distal ureterectomy, and ureteral reimplantation or interposition of an ileal segment between the ureter and bladder (19). Nephroureterectomy is a successful treatment alternative in cases of refractory pain in patients with ureteral endometriosis.

Due to the difficult differentiation of ureteral endometriosis and malignancy, physicians should keep in mind that ureteral endometriosis is also an important differential diagnosis for woman patients with ureteral obstruction presenting with chronic backache.

References


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