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Case Report

Surgical Management of Recurrent Ureteric Endometriosis Causing Recurrent Hypertension in a Postmenopausal Woman

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ABSTRACT Endometriosis is a common condition that affects as many as 10% to 20% of women of reproductive age. Because of the subtle clinical signs and symptoms and limitations of imaging methods, the diagnosis is frequently delayed or missed, with serious consequences including hypertension, hydronephrosis, and loss of kidney function. We present an unusual case of recurrent ureteric endometriosis in a postmenopausal woman to highlight the challenges of screening for and management of endometriosis. Journal of Minimally Invasive Gynecology (2010) 17, 100–103 © 2010 AAGL. All rights reserved.

Keywords: Ureter; Endometriosis; Postmenopausal; Hypertension; Management

Endometriosis is a common condition that affects as many as 10% to 20% of women of reproductive age [1]. The urinary tract is involved in about 2% of cases, with the ratio of bladder to ureter to urethra of 40:5:1 [1]. The true incidence of ureteric endometriosis remains unknown but has been estimated at 0.3% [1] to 1.5% [2] of all endometriotic cases. The typical woman with ureteric endometriosis is between age 30 and 35 years [3]. The lesion is usually unilateral, left-sided, and found in the distal third of the ureter [3].

Because of the subtle clinical signs and symptoms and limitations of imaging methods, the diagnosis is frequently delayed or missed, with serious consequences including hypertension, hydronephrosis, and loss of kidney function [4]. We report an unusual case of recurrent ureteric endometriosis in a postmenopausal woman to highlight the challenges of screening for and management of the disease.

Case Report

A 62-year-old postmenopausal woman had a 2-year history of recurrent urinary tract infections and left iliac fossa pain. At age 50 years, she had undergone a total abdominal hysterectomy and bilateral salpingo-oophorectomy for treatment of pelvic pain. Operative findings revealed an 18-week sized uterus with multiple myomas and a left cystic ovary that was densely adherent to the pelvic side wall. The surgeon commented that he could not be confident that all ovarian tissue had been excised. The right ovary and ureters were noted to be normal. Histologic analysis confirmed myomas, adenomyosis, and endometriosis in the left ovary. Estrogen patch therapy was initiated to treat menopausal symptoms.

The patient first came to our clinic in July 2002 at age 56 years with recurrent urinary tract infections, left iliac fossa pain, and labile hypertension. She had been receiving estrogen therapy since undergoing the total abdominal hysterectomy and bilateral salpingo-oophorectomy. Examination revealed tenderness in the left iliac fossa and left fornix. Ultrasonography and intravenous pyelography revealed an obstructed left ureter and hydronephrosis. Hormonal therapy was stopped at this stage because of suspicion that the underlying condition could be related to ureteric endometriosis.

In November 2002, with the assistance of a urologist, a severely obstructed left ureter was identified, ureterolysis was performed, and a chronically inflamed fibrotic mass was excised (Fig. 1) from the ureter at the level of the pelvic brim via laparoscopy for both excision of endometriosis and ureterolysis. Histologic analysis demonstrated complex endometrial hyperplasia with no atypia (Fig. 2). The patient made a good recovery with resolution of pain, hydroureter,

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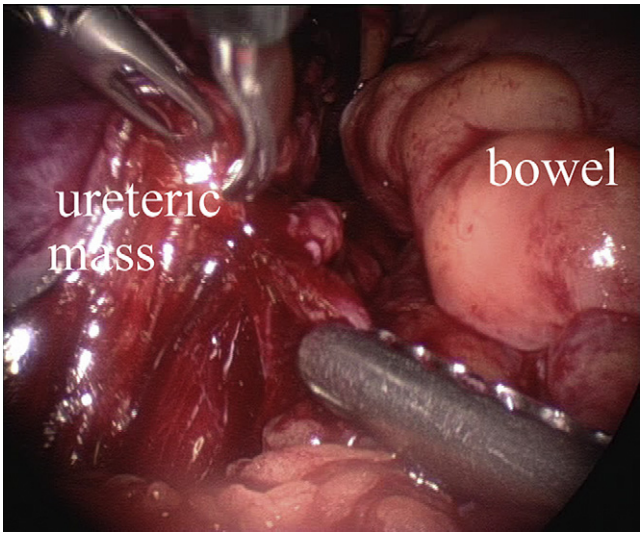

Fig. 1. Ureteric mass at the level of the left pelvic brim.

hypertension, and urinary tract infection. Hormone therapy was not resumed postoperatively.

The patient was followed up by her family physician on an annual basis and remained well until 2006, when she reported recurrent left iliac fossa pain. A computed tomography scan of the abdomen and pelvis showed no abnormality. Renal functions were normal. A year later, she again had recurrent left iliac fossa pain, recurrent urinary tract infections, and hypertension. Urologic assessments that included renal biochemistry, intravenous pyelography, cystoscopy, and retrograde ureterography revealed no abnormality. In November 2008, because of persistent symptoms that she described as similar to those she had experienced in 2002, a decision was made to perform exploratory laparoscopy. By that time, the patient was receiving multiple oral antihypertension medications (metoprolol, indapamide, and moxonidine). On the day of surgery, preoperative blood pressure was 150/100.

At laparoscopy, a small pigmented endometriotic lesion on the serosal layer of the rectosigmoid was found and excised. After mobilization of dense sigmoid adhesions from the pelvic brim, the left ureter was found to be mildly dilated. Following the course of the ureter by retroperitoneal dissection to the ureteric tunnel, a $2 \times 2 \times 2$-cm fibrotic mass encircling the ureter was identified (Fig. 3). The location of this lesion was different from that of the ureteric mass found in 2002, approximately 1 cm proximal from the vesicoureteric junction.

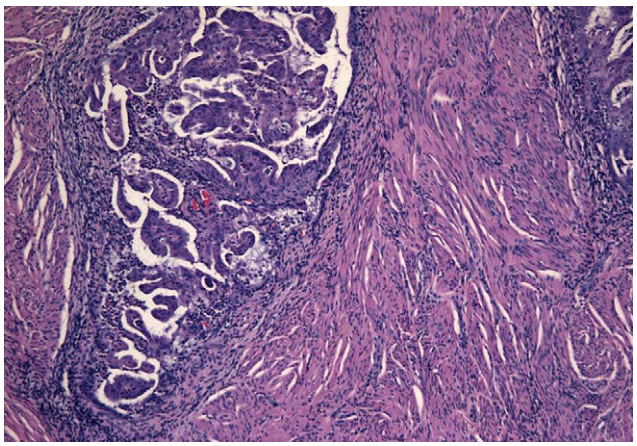

Fig. 2. Histologic analysis demonstrated complex endometrial hyperplasia of the ureteric mass.

Intraoperative blood pressure was extremely labile. Immediately after induction of anesthesia and intubation, there was a notable decrease in systolic blood pressure (Fig. 4, left arrow), from 149 to 100 mm Hg. Once surgery progressed, and in particular in association with surgical handling of the pathologic areas, sustained elevation of systolic blood pressure, increasing to 200 mm Hg, became an issue (Fig. 4, middle arrow).

Numerous pharmacologic interventions were undertaken by the anesthetist to minimize the acute intraoperative hypertension including administration of a variety of drugs used to increase depth of anesthesia (propofol, sevoflurane, and opioid agents) and specific antihypertension agents (metoprolol and clonidine). The blood pressure lowering effect of these interventions was unimpressive in both degree and duration. Once the ureteric endometriotic lesion was completely excised, the acute intraoperative hypertension rapidly resolved, with systolic pressure decreasing to 90 to 100 mm Hg (Fig. 4, right arrow). The postoperative recovery was uneventful, and blood pressure remained normal with systolic pressure in the range of 90 to 110 mm Hg. At discharge, the patient was able to cease taking 3 antihypertension medications, and blood pressure has remained normal. The left iliac fossa pain and urinary tract infections have also resolved. Histologic analysis confirmed endometriosis with no evidence of hyperplastic changes.

Discussion

The primary goals in the management of ureteric endometriosis are to relieve symptoms and prevent recurrence, relieve any urinary tract obstruction, and preserve renal function [4]. Factors such as patient age, fertility desire, extent of disease, severity of urinary tract and gynecologic symptoms, and presence of other pelvic disease determine the choice of treatment [4].

Ureteric endometriosis can be managed medically and surgically. In patients with early disease in which renal function is normal with no evidence of obstructive uropathy, hormone therapy such as danazol, progestins, and gonadotropin-releasing hormone agonist may be considered. However, success rates have been variable. Some authors have reported success with hormone therapy in reversing ureteral obstruction [5,6], whereas others have shown no disease resolution but instead deterioration [7] during treatment. Close regular monitoring of renal function in patients receiving medical treatment is, therefore, essential. Clinicians should also be aware that drug compliance may be compromised because of adverse effects [3].