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A Rare Condition: The Ureteritis Cystica A Report of Two Cases and Review of the Literature

Süleyman Kılıç*, Semih Yaşar Sargın**, Ali Güneş*, Deniz İpek*, Can Baydinç*, M.Tayfun Altınok***

*İnönü Üniversitesi Tıp Fakültesi, Üroloji AD, Malatya
** Türkiye Yüksek İhtisas Hastanesi, Üroloji Kliniği, Ankara
***İnönü Üniversitesi Tıp Fakültesi, Radyoloji AD, Malatya

In this report, we presented the findings of two cases of ureteritis cystica which is one of the rarest pathology of the urothelium, and reviewed the literature.

Key Words: Ureter, Ureteritis Cystica, Cysts, Urothelial Tumour

Nadir Bir Durum: Üreteritis Sistika İki Olguluk Rapor Ve Literatür Taraması

Bu raporda, ürotelyumun en nadir patolojilerinden birisi olan üreteritis sistikalı iki olgunun bulgularını sunduk ve literatürü taradık.

Anahtar Kelimeler: Üreter, Üreteritis Sistika, Kistler, Üretelyal Tümör

Ureteritis cystica is a rare, benign, proliferative condition characterized by multiple cysts and filling defects in the urothelium. In this report, two patients were presented. One of them had bilateral ureteritis cystica with multiple ureteral lesions in her both ureters on an intravenous pyelography and the other patient had a polypoid lesion at the right ureteral orifice.

CASE PRESENTATIONS

CASE ONE

In November 1997, a 65-year-old female patient was admitted with a history of stress urinary incontinence for 2 years. She did not have dysuria or hematuria in her medical history. A cystocele was noted on physical examination. The urinalysis revealed 8-10 erythrocytes and 2-3 leukocytes per high-power field. A midstream urine culture showed no bacterial growth. Blood levels of urea, creatinine, uric acid, and electrolytes were within normal limits. USG examination of the kidneys and the bladder were normal . An intravenous pyelography (IVP) showed three and four filling defects in the left and right ureters respectively (Figure 1 and 2). A cystometry confirmed the pure stress incontinence. Bilateral rigid ureterorenoscopy were performed under general anaesthesia. This showed six polypoid lesions in the right and four in the left ureter. Multiple biopsies were obtained from the lesions of both sides. Following this, a laparoscopic retropubic bladder neck suspension was performed. Histopathologic examinations of the biopsy materials were negative for malignancy and the condition was diagnosed as bilateral ureteritis cystica. Patient was followed every 6 or 12 months during a 45 months period. The routine contrast studies showed no significant interval changes in lesions, ureters or intrarenal collecting systems.

CASE TWO

In March 2000, a 45-year-old male patient who had been operated for chronic otitis media by otorhinolaryngology clinic was consulted for severe symptoms of bladder outlet obstruction. He had a history of intermittent hematuria and a left nephrolithotomy operation, which had been performed in 1987. Suprapubic pain was noted on physical examination. A urinalysis demonstrated 9-10 erithrocytes and 4-5 leukocytes per high-power field. A urine culture diagnosed E. coli greater than 10^5 colony per ml of the urine. Appropriate antibiotic therapy was started. Blood levels

Figure-1: IVP showing the filling defects in the right ureter of first patient.

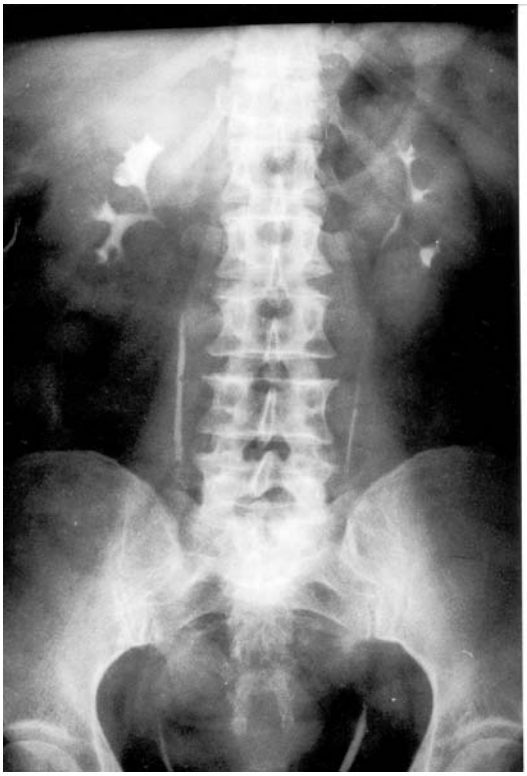
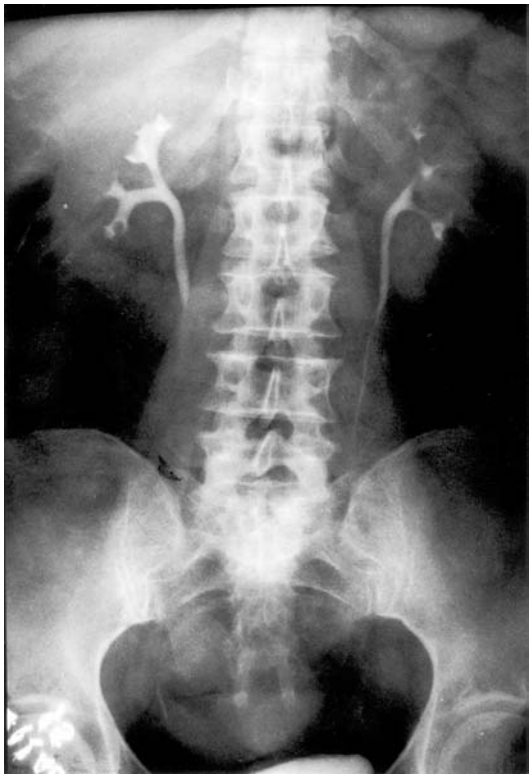


Figure-2: IVP showing the filling defects in the left ureter of first patient.



of urea, creatinine, electrolytes, and white cells were in normal ranges. USG revealed a stone in the right kidney, bilateral hydronephrosis, and a stone in the bladder. IVP demonstrated a filling defect on the right side of bladder wall (Figure 3). A technetium 99-DTPA scan combined with injection of 0.5 mg/kg furosemide, revealed nonobstructive residual dilatation at left kidney and obstructive dilatation in the right one. A polypoid lesion, approximately 8 milimeters in size, over right ureteral orifice was established during cystoscopy, under general anaesthesia. Following the resection of the polypoid lesion, a pneumatic lithotripsy at lithotomy position and a right which is performed nephrolithotomy at flank position were performed. Histopathologic examination diagnosed the ureteritis cystica. Following cystoscopies are being performed every 6 months for 20 months now and no recurrence or cancer development was established up to date.

DISCUSSION

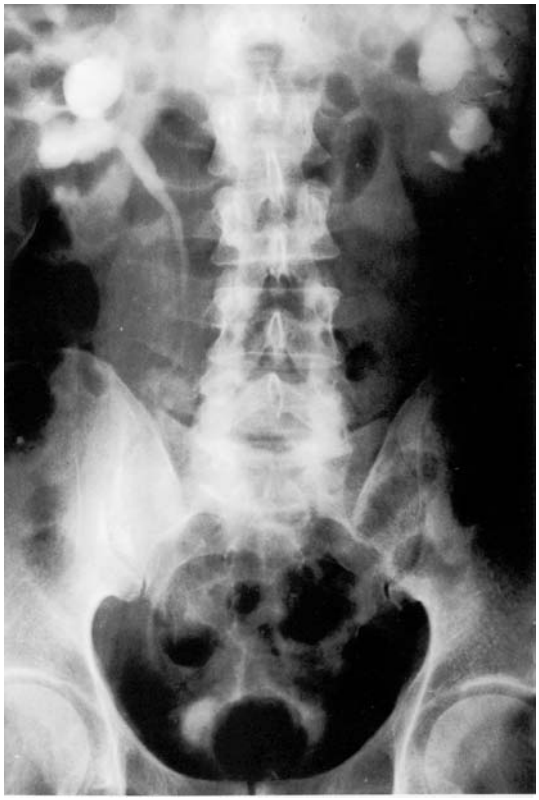
Ureteritis cystica more commonly effects older people and female and may be bilateral. This condition was reported first by Morgagni [1] and was first described by Richmond and Robb.[2]

There are several causes leading to ureteritis cystica. In a study investigating the histologic changes of the urothelium in the biopsy specimens of 43 patients obtained during stone surgery, five pyelitis or ureteritis cystica cases were established.[3] Urinary infections were present in 2 of the 6 patients in another series.[4] Ureteritis cystica occured in an oncology patient following instillation of formalin for the treatment of cyclophosphamide-induced hemorrhagic cystitis.[5]

Usually there is no symptom attributable to the ureteritis cystica, because of silence of the pathology. The obstruction secondary to lesions or scarring associated with long-standing infection may lead to stone formation and pain. Also, patients may suffer from the pain due to infection.

As in our patients, ureteritis cystica may be diagnosed incidentally in patients without any symptom associated with this lesion. A suspicious renal mass was found in the examination of urinary system of a patient with hypertension and the histologic studies of the surgical specimen demonstrated the ureteritis cystica.[6]

Figure-3: A filling defect on the right bladder wall on IVP in second patient



IVP and retrograde pyelography (RGP) are main methods in the diagnosis and follow-up of the ureteritis cystica. The small filling defects, bead-like appearance with regular surfaces in the urothelium are the typical findings of ureteritis cystica. In a study, authors pointed out that magnetic resonance urography could provide the diagnosis without using contrast agents and ionizing radiation.[7] But the major concern was cost of the procedure. Ureteritis cystica may be identified, biopsied, or removed successfully during ureterorenoscopy.

The non-opaque calculi, blood clots, polyps, papillary tumour, vascular impressions, tuberculosis, iatrogenic air bubbles, gas forming microorganisms, submucosal hemorrhage are involved in the differential diagnosis.

Although ureteritis cystica and carcinoma may be diagnosed in same patient, this does not appear to be a premalignant lesion. In the literature, there is only one case with ureteritis cystica in which adenocarcinoma of the ureter was diagnosed.[2] However, this patient had no prior radiological evaluations and it would seem that the ureteritis cystica was only an incidental finding. In a case report, a patient with transitional cell carcinoma of the bladder and ureteritis cystica in the ureter of soliter kidney was followed during 17 years. There was no appreciable radiological change in characteristic ureteropyelographic appearance and no recurrence of carcinoma.[8] Kindall reported a patient with 6.5 years follow-up and found no evidence of cancer.[9] Follow-up of our patients for 4 and 2 years respectively did not show any sign of cancer development.

Various methods can be used in the treatment of ureteritis cystica. In 1946, Kopp catheterized the ureters and instilled 2% silver nitrate. He obtained good results.[10] Petersen recommended a conservative attitude in the form of long-term antibiotics until radiographic findings normalized.[4] However, if an infection is not present, this measure seems unwarranted and the side effects related to antibiotics may arise. Patients did not receive any additional treatment and they did not show any alteration in their conditions.

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Yazışma Adresi:
Dr. Süleyman KILIÇ
İnönü Üniversitesi Tıp Fakültesi
Üroloji AD, 44069, Malatya
Telefon : 422 341 0660-5804
GSM : 533 265 2948
Faks : 422 341 0729
E-posta : skilic@inonu.edu.tr, drskilic@hotmail.com