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## Case report

# Ureteritis cystica: A rare benign lesion



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### KEYWORDS

Ureter;  
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### Abstract

Ureteritis cystica is an uncommon benign pathology of the ureter. The etiology is unclear but the diagnosis has become much easier to make with the routine use of ureteroscopy for diagnosis of ureteric lesions. We present a case of a 63 year old Sudanese woman with a history of repeated attacks of right loin pain in whom magnetic resonance urography (MRU) showed multiple filling defects in the right ureter. These were initially thought to be malignant urothelial lesions. Ureteroscopy revealed cystic smooth walled masses which discharged tiny turbid fluid on biopsy. An intraoperative diagnosis of ureteritis cystica was confirmed. The patient was managed conservatively.

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### Introduction

Ureteritis cystica is a benign condition which affects the renal pelvis and the ureter. When the condition affects the bladder, it is called cystitis cystica. There are scanty reports about ureteritis cystica in the literature. The first report was published by Morgagni [1]. He described the lesion as a proliferative condition characterized by multiple cysts and filling defects in the urothelium [2]. The etiology of the disease is not clearly known [3], but it is associated with chronic urothelial irritation caused by nephrolithiasis [4] and urinary tract infections [5]. It manifests as cystic areas of glandular metaplasia associated with chronic urothelial inflammation [5].

There are no specific symptoms attributable to the disease; it is most frequently detected accidentally, by radiography or during Ureteroscopy [6,7]. Radiographically, the presence of numerous uniform filling defects is highly suggestive of the disease [7].

Differential diagnosis include: multiple transitional cell tumors, ureteral pseudodiverticula, radiolucent stones, polyps, papillary tumors, vascular impressions, tuberculosis, iatrogenic gas bubbles, sloughed papillae, gas-forming microorganisms and submucosal hemorrhage [7].

### Case report

A 63-year old Sudanese female presented with right loin pain which was dull in nature. She also has recurrent episodes of lower urinary tract symptoms like burning micturition, frequency and sometimes urgency. Past medical history and review of systems was unremarkable. Urine analysis showed microscopic haematuria and pyuria on

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**Figure 1** CT urography showing multiple filling defects along the entire length of the right ureter.

several occasions. The urine was cultured three times and it grew *Escherichia coli* which was sensitive to most of the tested antibiotics. Serum creatinine, urea, electrolytes and CBC were within normal limits.

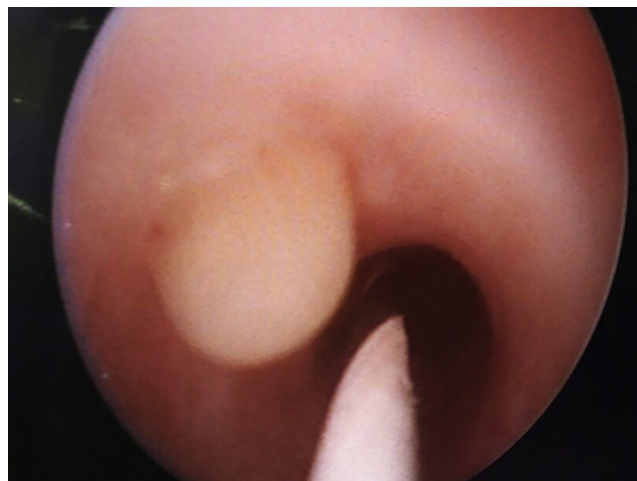
An ultrasound (US) of kidneys, ureters and bladder (KUB) showed a big right renal pelvic stone with right hydronephrosis. The left kidney, urinary bladder and the visible parts of the ureters were normal. A CT urography confirmed findings on US of KUB, but in addition showed an irregular outline of the right ureter with the possibility of multiple filling defects (Fig. 1). Subsequently, a magnetic resonance urography (MRU) was performed. The MRU confirmed findings on US of KUB and CT urography and also showed multiple irregular filling defects in the ureter.

For more information on the nature of the lesions in the right ureter, cystoscopy and ureteroscopy were done under general anesthesia. The bladder was found to be normal. The right ureteric orifice was easily identified and a size 8.5 FG long ureteroscope guided by a zebra guide wire could be easily introduced into the ureter and advanced up to the pelvi-ureteric junction (PUJ).

Multiple cystic lesions were seen along the right ureter up to the PUJ. They were on the lateral wall as well as the anterior and posterior wall of the ureter. One of the lesions was punctured and a cloudy fluid drained out of the cyst (Fig. 2).

## Discussion

Ureteritis cystica is a rare condition which is predominantly unilateral, but a few bilateral cases have been reported. Adult females are more commonly affected, but males and children may also have the disease [4]. Although the common location of the cysts is in the proximal ureter, in this case the cysts were distributed along the whole length of the ureter. The patient was investigated because



**Figure 2** Ureteroscopic appearance of ureteritis cystica.

of recurrent UTI and microscopic haematuria. The diagnosis of ureteritis cystica was an incidental finding which was confirmed by ureteroscopy. Renal pelvic stone was found which could be the underlying cause for the recurrent UTI and possibly the cause of the ureteritis cystica. CT-urography possibly complemented by MRU is a very reliable diagnostic tool if ureteritis cystica is suspected. A diagnosis of ureteritis cystica should be considered in unexplained finding of filling defects in the ureters. There are no guidelines for the management of ureteritis cystica apart from treatment of the underlying cause. In most cases this is due to chronic irritation by urolithiasis or chronic UTI and in most cases watchful waiting is sufficient. In cases where obstruction is caused by the cysts, puncture of the cysts may be considered. Our patient was managed conservatively after treatment of the renal calculus.

## Conclusion

Ureteritis cystica is a benign condition often secondary to underlying urological diseases like urolithiasis or chronic UTI. Imaging studies should be complemented with ureteroscopy to confirm the diagnosis. A diagnosis of ureteritis cystica should be considered in unexpected finding of filling defects in the ureter.

## References

- [1] Morgagni JB. De sedibus et causis morborum per anatomen indagatis libri quinque. London: William Cooke Translation; 1822. p. 316–411.
- [2] Ozdamar AS, Ozkurkugil C, Gultekin Y, Gokalp A. Should we get routine urothelial biopsies in every stone surgery. *International Urology and Nephrology* 1997;29:415–20.
- [3] Romero-Pérez P, Amat-Cecilia M, González-Devesa M. Pieloureteritis quística. Revisión de la literatura, período 1946–1994 y presentación de un nuevo caso. *Actas Urológicas Españolas* 1995;19:252.
- [4] Sandritter W. *Macropatología: manual y atlas para médicos y estudiantes*. Barcelona: Editorial Reverté, s.a.; 1981.
- [5] Kilic S, Sargin SY, Gunes A, Ipek D, Baydinc C, Altinok MT. A rare condition: the ureteritis cystica. A report of two cases and review of literature. *İnönü Üniversitesi Tıp Fakültesi Dergisi* 2003;10:87–9.
- [6] Menéndez V, Sala X, Álvarez-Vijande R, Solé M, Rodríguez A, Carretero P. Cystic pieloureteritis: review of 34 cases. *Radiologic aspects and differential diagnosis*. *Urology* 1997;50(1):31.
- [7] Rothschild JG, Wu G. Ureteritis cystica: a radiologic pathologic correlation. *Journal of Clinical Imaging Science* 2011;1(1):23.