

# Ureteral endometriosis: an uncommon cause of ureteral stricture

Apostolos Vrettos, Maria Prasinou, Rob Frymann

James Paget University Hospital NHS Trust, UK

Correspondence to: Dr. Apostolos Vrettos, James Paget University Hospital NHS Trust, UK. Email: dr.vrettos@hotmail.com.

Submitted Sep 03, 2015. Accepted for publication Dec 01, 2015.

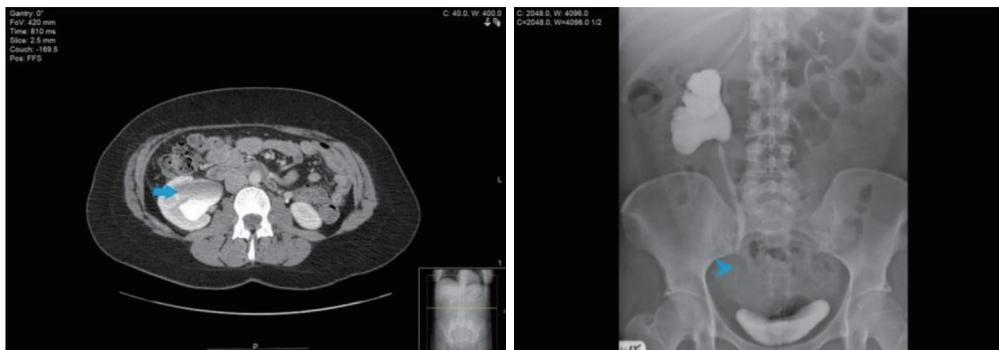
doi: 10.21037/qims.2016.01.02

View this article at: <http://dx.doi.org/10.21037/qims.2016.01.02>

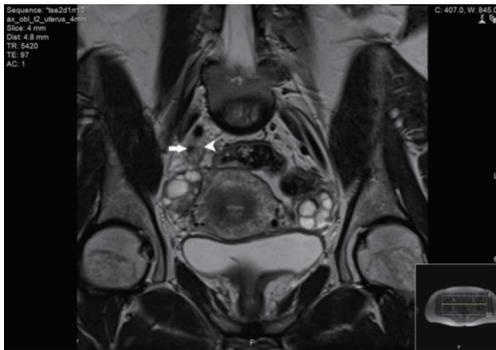
Endometriosis is a common disorder which affects 5–10% of women of reproductive age, for which the gold standard investigation for the diagnosis is laparoscopy and biopsy with histological confirmation (1,2). Urinary tract endometriosis occurs in ~1% of women with pelvic endometriosis (3). If it involves the ureters, it can present with renal colic and can cause hydronephrosis and renal complications due to obstruction, mainly in women of child-bearing age. The symptoms can be non-specific. Delayed diagnosis can lead to renal failure due to silent obstruction of the ureter (4).

We report a case of a 43-year-old lady who presented with recurrent episodes of right-sided colicky abdominal pain. She presented with severe, right-sided colicky abdominal and right loin pain radiating to the right groin. She reported similar episodes of pain in the past, but no clear diagnosis had been established. Her primary care physician had treated her conservatively for possible kidney stones, although there was no radiological evidence to support that. On examination, she was afebrile and her

vital signs were stable. Her blood results showed a mild elevation in her urea and creatinine levels. A computed tomography scan of the kidneys-ureter-bladder (CT KUB) revealed a moderate degree of right sided hydronephrosis but no stone was seen (*Figure 1*). An intravenous urogram (IVU) showed marked distension of the right pelvic calyceal system and narrowing of the right distal ureter (*Figure 1*). The patient then had a magnetic resonance imaging (MRI) scan which demonstrated abnormal soft tissue thickening in the right adnexal region, but no clear cause of the ureteral obstruction was identified (*Figure 2*). She then underwent laparoscopy to ascertain the nature of the pathology and to provide tissue diagnosis. The pathologic findings revealed elements of endometrial tissue which encased the distal ureter. Due to the proximity of the ureteral stenosis to the ureterovesical junction, the patient was treated with an open ureterocystoneostomy. She had an uncomplicated course and the pain resolved after the operation. She did not experience any further episodes of pain. She is being followed up as an outpatient regularly with monitoring of



**Figure 1** Computed tomography scan of the kidneys-ureter-bladder (CT KUB) demonstrating right sided hydronephrosis (arrow). Intravenous urogram (IVU) showing narrowing of the right distal ureter (arrowhead).



**Figure 2** Magnetic resonance imaging (MRI) scan of the pelvis showing abnormal tissue (arrowhead) which encases the right distal ureter (arrow).

her renal function, which remains normal and stable.

This case highlights an uncommon yet important cause of ureteral stricture which can even lead to loss of kidney function (5). The diagnosis relies heavily on clinical suspicion and definitive treatment might be difficult to be achieved. Magnetic resonance imaging is a useful preoperative tool for the diagnosis and assessment of ureteral endometriosis (6). It is important that this underdiagnosed condition, which may ultimately lead to renal failure, be diagnosed as early as possible. Then every effort needs to be made to restore and preserve renal function (7). In patients with hydronephrosis and the localization of the ureteral stenosis close to the vesicoureteral junction, the appropriate procedure is a ureterocystoneostomy, typically performed via an open technique (8). The laparoscopic procedure has also been successful in the treatment of distal ureteral stenosis (9).

### Acknowledgements

None.

**Cite this article as:** Vrettos A, Prasinou M, Frymann R. Ureteral endometriosis: an uncommon cause of ureteral stricture. *Quant Imaging Med Surg* 2016;6(2):231-232. doi: 10.21037/qims.2016.01.02

### Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

### References

- Olive DL, Schwartz LB. Endometriosis. *N Engl J Med* 1993;328:1759-69.
- Coleman L, Overton C. GPs have key role in early diagnosis of endometriosis. *Practitioner* 2015;259:13-7, 2.
- McGuire EJ, Gudziak M, O'Connell H, Ali V. Gynecological aspects of urology. In: Gillenwater JY, Grayhack JT, Howard SS, Duckett JW, editors. *Adult and Pediatric Urology*. Mosby, St Louis 1996:1853-78.
- Al-Khawaja M, Tan PH, MacLennan GT, Lopez-Beltran A, Montironi R, Cheng L. Ureteral endometriosis: clinicopathological and immunohistochemical study of 7 cases. *Hum Pathol* 2008;39:954-9.
- Umar SA, MacLennan GT, Cheng L. Endometriosis of the ureter. *J Urol* 2008;179:2412.
- Balleyguier C, Roupret M, Nguyen T, Kinkel K, Helenon O, Chapron C. Ureteral endometriosis: the role of magnetic resonance imaging. *J Am Assoc Gynecol Laparosc* 2004;11:530-6.
- Kerr WS Jr. Endometriosis involving the urinary tract. *Clin Obstet Gynecol* 1966;9:331-57.
- Mereu L, Ruffo G, Landi S, Barbieri F, Zaccoletti R, Fiaccavento A, Stepniewska A, Pontrelli G, Minelli L. Laparoscopic treatment of deep endometriosis with segmental colorectal resection: short-term morbidity. *J Minim Invasive Gynecol* 2007;14:463-9.
- Stepniewska A, Grosso G, Molon A, Caleffi G, Perin E, Scioscia M, Mainardi P, Minelli L. Ureteral endometriosis: clinical and radiological follow-up after laparoscopic ureterocystoneostomy. *Hum Reprod* 2011;26:112-6.