



CLINICAL IMAGES

Flank pain, haematuria and poor patient compliance: Beware the 'forgotten' JJ stent!

Yusuf Seedat, Ahmed Adam

A 40-year-old man presented with right-sided flank pain of sudden onset and intermittent macroscopic haematuria that had been present for the past 3 months. He had had a hospital admission for a right ureteric stone 3 years previously, where some 'intervention' had been performed. He had been told to return for a follow-up visit, but had defaulted as he felt well after being discharged.

The patient was clearly distressed, with right-sided renal angle tenderness and severe suprapubic pain. A plain supine abdominal film (Fig. 1) and non-contrast computed tomography (CT) scan (Fig. 2) revealed an encrusted 'forgotten' JJ stent with a significant associated secondary stone burden.

A renogram confirmed that the right kidney had been severely affected by the subsequent stone burden, now contributing only 10.32% of the overall renal function.

Discussion

Ureteral JJ stents are invaluable in endo-urological practice, as they provide free drainage from the kidney to the bladder and are effective in relieving and preventing upper urinary tract obstruction.¹ However, complications occur in up to one-third of patients,^{2,3} which most commonly include stent encrustation, stent migration, stent fracture and secondary stone formation.¹ Other complications include dysuria, frequency, vesico-ureteric reflux and ureteral fistula.³ For stents that have lost their radio-opaque coating or when radiography is contraindicated, ultrasonography is the diagnostic modality of choice.¹

Treatment usually involves endoscopic removal of the retained stent. For stents with a high stone burden, the use of a



Fig. 1. Plain supine abdominal radiograph revealing the right 'forgotten' JJ stent with the associated encrusted renal calculus and two distinct bladder calculi.

combination of percutaneous nephrolithotripsy, extracorporeal shockwave lithotripsy, ureteroscopy, electrohydraulic lithotripsy, laser lithotripsy and percutaneous chemolysis may be necessary, with clearance rates of up to 100% being achieved.⁴

Careful selection of patients who stand to benefit most from JJ stent insertion is essential to prevent unnecessary complications.¹ Some patients may disregard counselling concerning the stent's impermanent nature, the need for a return visit for its timeous removal and subsequent intervention.

This is particularly relevant in settings with poor patient compliance, inadequate record keeping, language barriers, ineffective follow-up strategies and limited access to

Yusuf Seedat, MB BCh (Wits), is currently a medical officer in the Department of Radiology, Leratong Hospital, and is intending to pursue a long-term career in that field. He hopes to be part of a system that will eventually make advanced diagnostic imaging an affordable and accessible reality for those South Africans most in need.

Ahmed Adam, MB BCh (Wits), Dip PEC (SA), is currently a registrar in the Department of Urology, University of Pretoria.

Corresponding author: A Adam (aadam81@gmail.com)



Fig. 2. Abdominal CT scan (3D reconstruction) illustrating the stone burden along the JJ stent. Fracture of the distal stent can also be seen.

specialised health care. The presence of a ‘forgotten’ JJ stent in patients presenting with flank pain and haematuria should be considered, as it may have devastating consequences if left undetected.

We would like to thank Drs J van Heerden and R Roux of the Department of Radiology, Kalafong Hospital, for assisting with the images.

1. Memon NA, Talpur AA, Memon JM. Indications and complications of indwelling ureteral stenting at NMCH, Nawabshah. *Pakistan Journal of Surgery* 2007; 23(3): 187-191.
2. Ringel A, Richter S, Shalev M, Nissenkorn I. Late complications of ureteral stents. *Eur Urol* 2000; 38: 41-44.
3. Singh I, Singh S. Missed fractured ‘trapped JJ stent’ in a solitary functioning renal unit – Implications of management. *Int Urol Nephrol* 2003; 35: 247-249.
4. Park K, Jeon S, Park H, Kim HH. Clinical features determining the fate of a long-term, indwelling, forgotten double J stents. *Urol Res* 2004; 32: 416-412.



When you need it most

Netcare 911 Emergency Services Team offers you world-class emergency medical assistance, evacuation by road or air and telephonic medical advice. South Africa’s trust and confidence in Netcare 911 was proved last year when we were voted the country’s top healthcare brand.

Netcare 911. 24 hour emergency medical assistance you can count on.

Netcare 911 is an Authorised Financial Services Provider.

