CASE REPORT

Broken retrieval string leads to failed self-removal of a double-J ureteral stent

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Double-J ureteral stents facilitating the drainage of urine from the kidney to the bladder are widely used. Stents designed for patient self-removal are commonplace. We report a case of urosepsis that lead to the incidental discovery of a failed self-removal of a double-J ureteral stent. The retrieval cord broke during self-removal and the patient mistook the string for the stent. Adequate patient education is essential to assure successful self-removal.

Key Words: ureteric stent, double-J stent, self-removal, complications, patient education

Case report

A 22 year old female with four previous urinary calculi presented with a 24 hour history of left flank pain and lower urinary tract symptoms. A KUB X-ray revealed a 5 mm radio-opacity at the level of the left UVJ and two small radio-opacities in the lower pole of the left kidney. An antegrade IVP revealed a marked delay in left calyxeal filling with no contrast entering the ureter. A provisional diagnosis of a left distal ureteral calculus was made. The patient underwent cystourethroscopy, a left retrograde pyelogram and uneventful ureteroscopic basket extraction of her stone. A double-J stent was inserted under fluoroscopic guidance Figure 1. The patient was

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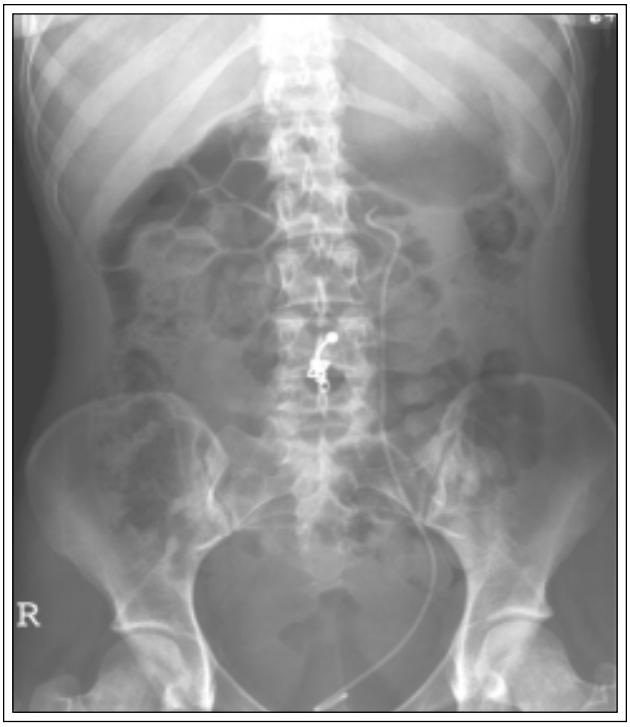

Figure 1. A double-J stent displaced distally with the proximal end in the proximal left ureter. The retrieval string broke during removal.

discharged home with follow-up and instructions to remove her stent the following day.

The patient attempted to remove the stent as instructed, but the retrieval string broke and the patient mistook the string for the stent.

Three days later, the patient presented to the emergency room with flank pain, suprapubic pain, dysuria, chills, a 40ºC fever, nausea and vomiting. Investigations revealed a leukocyte count of 16000/ml and normal creatinine. A KUB showed a double-J stent displaced distally with the proximal end in the proximal ureter and the two aforementioned small left lower pole calcifications. Ultrasound showed no ureteric hydronephrosis. A clinical diagnosis of urosepsis was made. Intravenous antibiotic therapy was initiated. The stent was removed cystoscopically and a new double-J stent was inserted under fluoroscopic guidance. The patient gradually improved on antibiotic therapy and was discharged in 3 days.

Discussion

Reported early and late complications of stent insertion include stent fragmentation, migration, encrustations, worsening or no improvement of hydronephrosis, pain, irritative voiding symptoms, vesicoureteral reflux, urinary tract infection, hematuria and fistulae.[1,2,3,4] Increasingly we have encouraged patients with stents to remove the stents themselves particularly after outpatient ureteroscopic procedures.

To date we know of no other reported cases of broken double-J stent retrieval strings. This case highlights the need for adequate patient education. We suggest a detailed verbal description or, preferably, showing the patient a stent before the anaesthetic so they can better evaluate successful self-stent removal. It may also be prudent to arrange a follow-up KUB X-ray to ensure successful stent self-removal. A few extra moments of teaching may help to prevent stent retention, fragment retention and the complications thereof. □

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