

# A partially prolapsed, encrusted Double J (D/J) stent: A Case Report

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## Citation

H Patel, R Chaudhary, D Shah. *A partially prolapsed, encrusted Double J (D/J) stent: A Case Report*. The Internet Journal of Surgery. 2006 Volume 13 Number 2.

## Abstract

A patient from a poor socioeconomic background presented to us with a stent coming out through the external urethral meatus since two days with past history of open surgery for right PUJ obstruction with D/J stent insertion two years ago. Ultrasonography revealed moderate hydronephrosis of the right kidney with a calculus measuring 20mm in the renal pelvis. Intravenous urography revealed delayed excretion of contrast medium in the right kidney. After cutting the vesicle end of the stent flush with the external urethral orifice, the renal pelvic coil of the stent along with the 20mm calculus formed on it was extracted through a right open pyelotomy with relative ease. The post-operative course was uneventful and the patient was discharged in seven days.

## INTRODUCTION

The double J (D/J) stent provides a convenient means of drainage for the upper urinary tract. However, a forgotten stent is frequently complicated and poses a management and legal dilemma. Here, we report a case of a forgotten D/J ureteral stent with stone formation at its renal pelvic and vesicle ends with prolapse from the external urethral meatus, albeit incomplete.

## CASE REPORT

A 19-year-old female from a poor socioeconomic background presented to us with a stent coming out through the external urethral meatus since two days. Her attempts at pulling at the stent resulted only in pain and no further distal migration of the stent. In addition, she complained of right flank pain and burning micturition. She had a past history of open surgery for right PUJ obstruction with D/J stent insertion two years ago. On examination, the vesicle end of the D/J stent (8cm) with encrustations was seen coming out through the external urethral meatus. The encrustations were 8-10mm in diameter and 3 in number. A well healed scar was present in the right flank.

## Figure 1

Figure 1: Vesicle end of D/J stent



Laboratory examinations revealed a total leucocyte count of 12,000 per cu mm. Urine microscopy revealed plenty of pus cells. Serum creatinine was normal. X-ray KUB revealed a 20mm calculus in the right kidney formed on the renal pelvic coil of the D/J stent in situ. Ultrasonography revealed moderate hydronephrosis of the right kidney with a calculus measuring 20mm in the renal pelvis. Intravenous urography revealed delayed excretion of contrast in the right kidney.

**Figure 2**

Figure 2: Plain X-Ray KUB



**Figure 3**

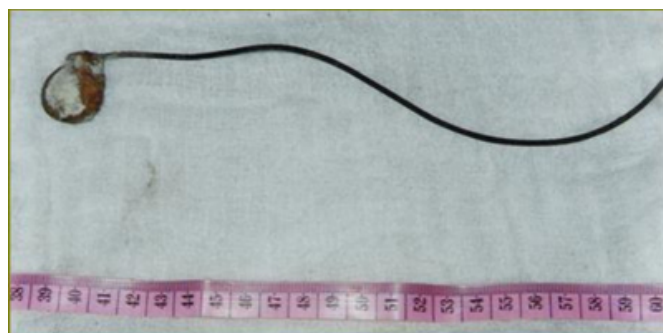
Figure 3: IVP Plate 5min



The vesicle end of the stent was cut flush with the external urethral orifice. Through a right open pyelotomy, the renal pelvic coil of the stent along with the 20mm calculus formed on it was extracted with relative ease. The post-operative course was uneventful and the patient was discharged after seven days.

**Figure 4**

Figure 4: DJ Stent along with the 20mm calculus formed on it



## **DISCUSSION**

D/J stents constitute an important armamentarium in the hands of an urosurgeon. They provide direct drainage of the upper urinary tract without the need for external diversion.

During short term placement (4-12) weeks, they may cause flank pain and irritative voiding symptoms, referred to as “stent syndrome.” Complications occur in patients with long term placement of stents who do not come for follow-up - the forgotten stent.<sup>(1)</sup> These late complications are hydronephrosis, encrustation and blockage, stuck stents, stent migration, stent knotting and fracture, spontaneous fragmentation and stenturia.

During insertion of a ureteric stent, one should not only ensure its accurate placement but also that the length chosen is appropriate for the patient. Migration of a stent is a known complication. <sup>(1)</sup> In our patient, the vesicle end of the stent (8cm) had prolapsed through the external urethral meatus with encrustations on its surface. The proximal end of the stent remained in the renal pelvis with a large calculus formed around it, as shown in X-ray KUB. It is evident that the length of the stent chosen was much more than required.

Endourologic management of a forgotten D/J stent is well established and there is an algorithm available for the same. However, it should be managed endoscopically only by those well trained and sufficiently advanced in endourology. Open surgery has a role when multimodal endourology fails or when such a facility is not available, as in our case.<sup>(2)</sup>

The stent is a double-edged weapon and its routine use is not justified. Certain precautions and guidelines must be observed whenever it is deployed. Where endourological facilities are not available in institutions or nursing homes or when a general surgeon operates, indwelling stents should be avoided wherever possible. Instead, temporary ureteric catheters can be used which the patients notice and which are removed prior to discharge. When use of a D/J stent is mandatory, the patient should be educated about the need for its timely removal. The patient's name, address and telephone number should be recorded in a stent register. The treating surgeon should regularly update his stent register so as to track overdue stents and ensure their removal at the earliest.<sup>(1)</sup> This will avoid unnecessary morbidity for the patient and legal problems for the doctor.

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