

## “Bilateral Double J Stent Removal: The way to do it!”

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### INTRODUCTION

Double J (DJ) stenting is a common procedure in urology. There are certain prophylactic and therapeutic indications for bilateral DJ stenting like bilateral calculus obstruction, following bilateral lower ureteric reimplants, in cases of malignant ureteral obstruction and after bilateral uretero-renaloscopy (URS).<sup>[1]</sup> After the purpose of stents is over, patients are subjected to DJ stent removal. Usually the stents are removed one after the another. Many simplified methods are described in the literature for removing single DJ stent.<sup>[2,3]</sup> None of the techniques so far has mentioned simultaneous retrieval of both DJ stents. We present the technique of removing both the DJ stents in one go with stent removal forceps obviating the need for inserting the cystoscope twice.

### MATERIALS AND METHODS

6 patients were subjected to bilateral DJ stent removal from February 2011 to November 2011 after written and informed consent. Indications for bilateral DJ stenting were following bilateral URS in 4 patients and bilateral extracorporeal shock wave lithotripsy for pelvic calculi in 2 patients. All patients were positioned in lithotomy. Rigid cystoscopy was done using 19 Fr Sheath and 30 degree lens (KARL STORZ, Germany) in all patients. 5 Fr stent removal forceps is passed through the channel

### ABSTRACT

There are many urological and non-urolological indications which require bilateral double J stenting. We describe a point of technique for simultaneous removal of both the Double J stents. Both the stents are held by stent removing forceps at a point where they cross each other and then removed in one go with the help of cystoscope. Medline search did not reveal any techniques of removing two DJ stents in one go.

**Key words:** Bilateral DJ stent, Double J stent, simultaneous removal, stent removal, ureteric stent

of the cystoscope bridge into the bladder. The bladder is kept partially filled, otherwise the two crossing stents will diverge apart. The two stents appear to be crossing like a “X” when seen cystoscopically [Figure 1]. With the help of stent removal forceps, both the DJ stents are grasped at the point of crossing i.e. at the mid-point of “X” and retrieved simultaneously along with the cystoscope [Figure 2].

### DISCUSSION

All the patients underwent successful removal of both the DJ stent in one go without any complications. Mean operative time from introduction of cystoscope till complete removal of bilateral stents simultaneously was 1 min 45 secs. In all the cases stents were crossing each other. It was ensured by imaging studies (X-ray and USG KUB) in all patients, prior to DJ stent removal that there will not be any chance of recurrent obstruction on either side. We recommend that our technique should be practiced in calculus disease after confirmation of stone clearance. It is not recommended for simultaneous removal of bilateral DJ stents in cases of bilateral lower ureteric reimplants and in situations of malignant ureteral obstruction wherein the usual practice is to remove/replace one side stent followed by another. The dual DJ removal concept is more relevant when DJ stent is being removed with the help of flexible cystoscope in which case the entire scope needs to be passed again to retrieve the second DJ stent.

Other described simplified techniques for stent retrieval include a nylon thread attached to the end of the stent, which dangles from the external meatus, enabling manual

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10.4103/2006-8808.110273

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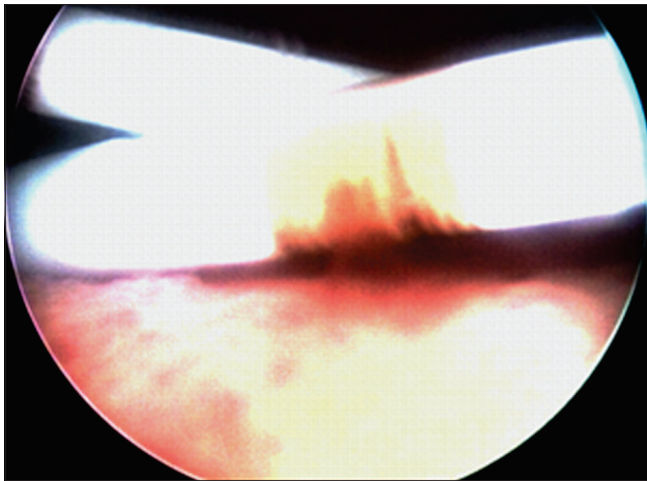


Figure 1: Cystoscopic appearance of two DJ stents crossing like a "X"

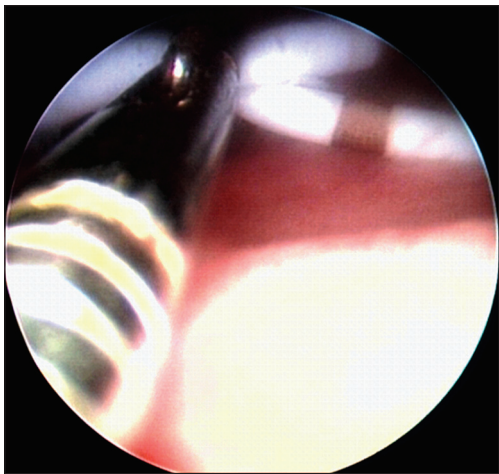


Figure 2: Cystoscopic appearance of 5 Fr stent removal forceps grasping both the DJ stent at the mid point of "X" (or at point of crossing) and being retrieved

withdrawal of the stent without anesthesia.<sup>[4]</sup> This solution is for the short term only because the dangling suture some-times causes unintentional dislodgment of the stent and may also be associated with a slight degree of incontinence.<sup>[4]</sup> Also, a wire introducer with a snail head coil at its distal end has been described for blindly grasping the

stent within the bladder of women only.<sup>[5]</sup> Magnetic retrieval of stents by using a magnet on the retrieval urethral catheter and attaching a magnetically attractive, stainless steel bead to the end of a stent has also been used in the past.<sup>[6]</sup> All these methods may be applied for removal of both stents simultaneously but their simplicity appears questionable.

Present study has certain limitations. First, we have not compared the operative time with the standard technique of removing one stent after other. Secondly, some may argue that during rigid cystoscopy, stents can be removed in succession with sheath left *in situ* but in our opinion removing stents with endoscope alone may damage the delicate instrument. Our technique holds a special value in the era of flexible cystoscopy where repeated instrument manipulation for retrieval of stents can be avoided.

## CONCLUSION

Our technique is a simple method of removing both the DJ stents simultaneously in one go and thus, avoid the need of reinserting the scope to remove the second DJ stent and logically, saves operating time.

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**How to cite this article:** Yadav R, Dalela D, Goyal NK, Nagathan D, Sankhwar SN. "Bilateral Double J Stent Removal: The way to do it!". *J Surg Tech Case Report* 2012;4:138-9.

**Source of Support:** Nil, **Conflict of Interest:** None declared.