International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 8; Issue 04 (D); April 2019; Page No.18290-18293
DOI: http://dx.doi.org/10.24327/ijcar.2019. 18293.3493

Research Article

FORGOTTEN/ RETAINEDDJ STENT - OUR INSTITUTIONAL EXPERIENCE

Periasamy ponnusamy[1], Aysha shaheen*[2] and D.Karthikeyan[3]

[1,2]Department of Urology, Government Kilpauk Medical College Hospital, Chennai, Tamilnadu
[3]Government Kilpauk Medical College Hospital, Chennai, Tamilnadu

ARTICLE INFO

Article History:
Received 15th January, 2019
Received in revised form 7th February, 2019
Accepted 13th March, 2019
Published online 28th April, 2019

Key words:

Retained DJ Stent, Fragmented DJ Stent, Encrustations, Lithotripsy

ABSTRACT

Introduction: Forgotten/ Retained Double J stents are associated with significant morbidity and mortality, if not intervened timely. So the presentresearch was doneto study consequences, management and their potential complications of forgotten/ retained DJ stents.

Material and Methods: We retrospectively analysed the records of patients presented to the Department of Urology , KILPAUK MEDICAL COLLEGE & HOSPITAL with forgotten or long term retention of DJ stents from January 2016 to January 2019. All cases were reviewed for age, gender, indication for insertion of DJ stent, duration of stent insertion, radiological images and surgical procedures performed.

Results: During studyperiod, totalof 15patients reported to our department with history of forgotten/ retained DJ stents. 3 patients had severe encrustations with both renal and vesical calculus. 4 out of 10 patients with severe encrustation & patients had fracture stents and vanishing portions of stents.2 patients presentedwith renalfailure. 3 patients with mild encrustation, A combination of CLT(Cystolithotripsy), PCNL,Ureteroscopy, ESWL and open surgeries were done to clear the stones and extract the DJ stent.

Conclusion: Forgotten or retainedDJ stent is a source of severe morbidity. Pre procedural and post procedural operative counselling of the patient regarding the DJ stent is necessary.

INTRODUCTION

DJ stent provides convenient means of drainage to the upper urinary tract. The J-shaped tips - prevents migration from the kidneys/ Urinary bladder.DJ stents are in common use because they provide efficient and relatively safe urinary diversion between the kidney and the urinary bladder. Forgotten / retained Double J stents are associated with significant morbidity and financial strain for the patients and legal problems for the doctors, if not intervened timely.

Aims and Objective

Present study was done to study the consequences of forgotten/ retained DJ stents, their potential complications and management.

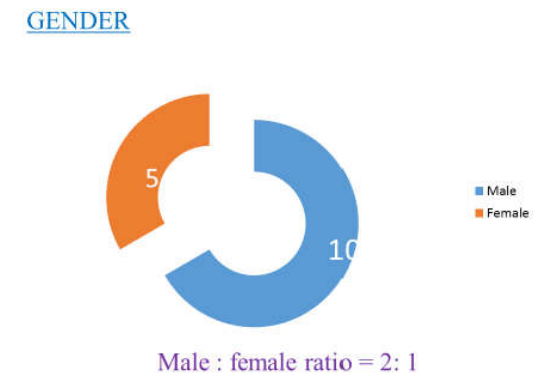
MATERIALS AND METHODS

Study done in Department of urology, KILPAUK MEDICAL COLLEGE &HOSPITAL, CHENNAI over a period of JANUARY 2016to JANUARY 2019.All cases with forgottenor long term retained DJ stents included in study .Data analysed on basis of age , sex , duration of stent placement, presenting complaints , indication for DJ stent insertion and , radiological images , and surgical procedures performed for stent is removed. Forgotten stent is taken as duration more than 6 month from procedure.

Corresponding author:* **Aysha shaheen
Department of Urology, Government Kilpauk Medical College Hospital, Chennai, Tamilnadu

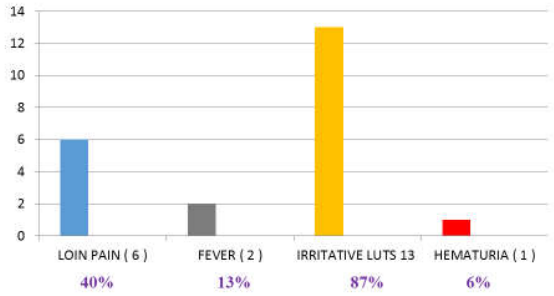
RESULTS

Total No of patients – 15, 10 – male, 5- female, male to female ratio is 2:1.

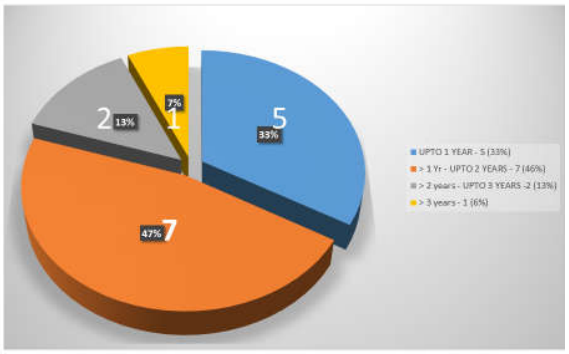


Patients presented with complaints like fever , loin pain irritative LUTS as are shown in graph , most common presentation is LUTS presented in 13 cases (87 %) , and 6 cases (40 %) are presented with loin pain , other complaints are like fever (2 cases , 13 %) and haematuria (1 case , 6 %) is comparatively less.

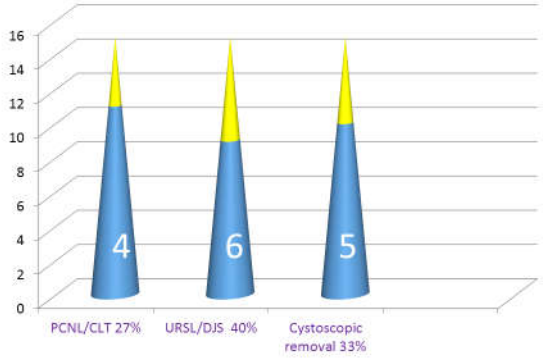
PRESENTING COMPLAINTS



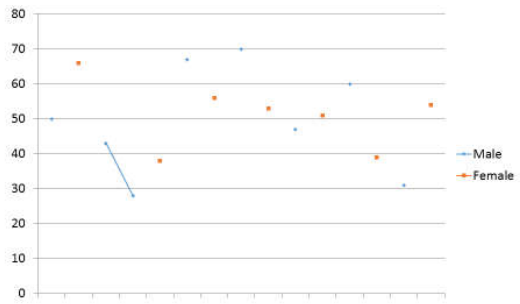
STENT DURATION



INTERVENTIONS



AGE DISTRIBUTION



Male age : 28 – 70yrs (50) & Female : 38 – 66 yrs (50)

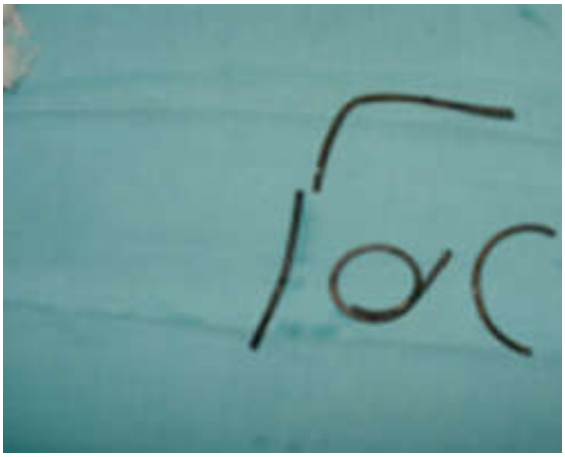
Imaging Findings: X RAY AND CT KUB (PLAIN)

Retained stent with encrustations.

Encrustation with stent fracture or no significant encrustation on imaging

Retained B/L Dj Stent

Severe Encrustation of DJS



Fragmented DJ stent

CT KUB - severe encrustation in bladder

DISCUSSION

DJ ureteral stent - an integral part of the urological armamentarium.

Allows good urinary drainage from the kidney to the bladder and generally safe and well tolerated.

Complications may occur with short- or long-term use of indwelling stents – from minor side effects such as flank and suprapubic pain, haematuria, dysuria, and frequency Major complications such as stent migration, encrustation, & stent fractureEncrustation of forgotten stents - serious problem due to recurrentUTI, haematuria, urinary tract obstructions, and renal failure.

Aetiology - multifactorial.

1. Prolonged duration of stenting
2. Urinary sepsis
3. Previous history or simultaneous occurrence of stone disease

In our case series, the most prominent factor was previous existence of Urolithiasis & Prolonged stent duration.

STENT – MATERIAL

Early complications during the first 4 weeks after stent insertion were stent discomfort (37.6%), irritative bladder symptoms (18.8%), haematuria (18.1%), bacteriuria (15.2%), fever >104 degrees F (12.3%) and flank pain (25.3%); late complications included hydronephrosis (5.7%), and stent migration (9.5%), encrustation (21.6%), fragmentation (1.9%) and breakage (1.3%)[1]

A patient treated for nephrolithiasis formed knots in 2 occasions, in 2 separate indwelling ureteral stents. This rare complication may make stent removal difficult[2,] no such complication was noted in our study.

The stent related complication can be directly lethal for the patient or indirectly can cause death because of complications related to operative intervention.[3,] while no lethal complication noted in our study.

Forgotten/encrusted DJS may lead to complications in a range of urinary system Infections, up to a loss of renal function. They can be safely and successfully removed, and theRenal function can be preserved by endourologic techniques, starting with the least invasive procedures in centers highly experienced[4].

In our study stents were placed outside our GH, composition of the stents was POLYURETHANE.

El-Faqih *et al*[5] - Reported that the stent encrustation rate increased from 9.2% in less than 6 weeks to 47.5% between 6 and 12 weeks, and up to 76.3% in later than 12 weeks.

In case of severe incrustations, management modalities are more complex. Many investigators have employed ESWL, URS-SE, laser-lithotripsy, PCNL, chemolysis using various chemolytic agents administered via a percutaneous nephrostomy tube, and open surgery either alone or in combination with other procedures [6, 7]. With widespread usage of endoscopic instruments, a tendency to use relatively non-invasive interventions has been observed. However, in the literature, frequent usage of multimodal treatment principles is remarkable [6, 8, 9].in our study most common intervention is

URSL (40 %) and PCNL done in 27 % cases. In our study – 67 % patients had significant Encrustation who have indwelling stent duration > 1yr & 33% of patients had no significant encrustation whose indwelling stent duration < 1 year .

CONCLUSION

Forgotten or retained DJ stent is a source of severe morbidity and also financial strain tothe patient and legal problems for the doctors.

Counselling before and after the procedure regarding DJ stent placement and its removal plays a vital role to avoid the retained/forgotten stent.

Maintaining the stent registry is simple and feasible. Computer based stentregistry with patient directed automated information system can also be used. It is our duty to educate the patient about the stent and duration and EXPLAIN WITH POST OP X RAY.

We strongly recommended that Documentation – Informed Consent from the patient and relative in the Case Sheet and Discharge Summary in Patient's own Language and contact number should be taken.

References

1. Damiano R, *et al*, Early and late complications of double pigtailUreteral stent. Urol Int 2002; 69:136-40.
2. Eisner B, Kim H, Sacco D. Repeat knot formation in a patientWith an indwelling ureteral stent. Int Braz J Urol 2006; 32:308-9.
3. Singh V, Srinivastava A, Kapoor R, Kumar A. Can theComplicated forgotten indwelling ureteric stents be lethal? IntUrol Nephrol 2005; 37:541-6.
4. Senol Adanur and Fatih Ozkaya, Challenges in treatment and diagnosis of forgotten/encrusted double-J ureteral stents: the largest single-center experience, Renal Failure 38(6):1-7 · April 2016
5. ElFaqih SR, Shamsuddin AB, Chakrabarti A, Atassi R, and Kardar AH, and Osman MK, *et al*. Polyurethane internal stents in treatment of stone patients: Morbidity related to indwelling times. J Urol. 1991; 146:1487–91.
6. Vidhyadhar Kelkar and Deepak PatilManagement of forgotten double J stent and severe multiple large encrusted stones in the bladder and renal pelvis,Cent European J Urol. 2012; 65(4): 238–241
7. Tsai CC, Shen JT, Huang SP, *et al*. Use of a holmium laser to treat a forgotten double-J stent with whole stent encrustations: a case report. Med Sci. 2009; 25(10):567–571.
8. Vanderbrink BA, Rastinehad AR, Ost MC, Smith AD. Encrusrated urinary stents:evaluation and endourologic management. J Endourol. 2008; 22(5):905–912.
9. Kehinde EO, Al-Awadi KA, Tawheed A, *et al*. Factors affecting the fate of prolonged forgotten 'J' stents. Scand J Urol Nephrol. 2001; 35:222.
10. Santin M, Motta A, Denyer SP, *et al*. Effect of the urine conditioning film on ureteral stent encrustation and characterization of its protein composition. Biomaterials. 1999; 20:1245–1251.

How to cite this article:

Periasamy ponnusamy, Aysha shaheen and D.Karthikeyan (2019) ' Forgotten/ Retaineddj Stent - our Institutional Experience ', *International Journal of Current Advanced Research,* 08(04), pp. 18290-18293.
DOI: http://dx.doi.org/10.24327/ijcar.2019.18293.3493

****