



## CASE REPORT

### Which One is Prefer and Safe in Auto Transplantation for Repairing of Full Length Complete Avulsed Ureter, Immediately or Delayed?

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#### ARTICLE INFO

Article history Received:

Aug 08, 2020

Accepted: Oct 23, 2020

Published: Dec 20, 2020

Volume: 5

Issue: 3

Key words:

Ureterscopy, Ureteral Complete Avulsion, Transureteral Lithotripsy, Auto transplant, Ureteral Stone

#### ABSTRACT

**Introduction:** In modern medicine in the field of urology, sometimes some techniques result in awful complications such as ureter strictures and complete avulsion.

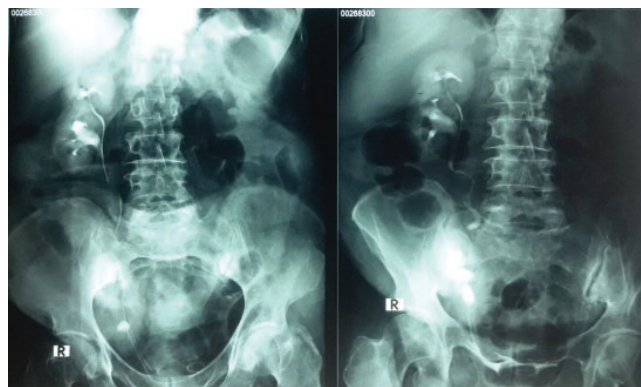
**Case presentation:** In this case series, we report four cases including a male and 3 female patients (age range: 55-80 years) who developed complete ureters avulsion during transurethral lithotripsy. The main action that has been done was auto transplant. All of four patients discharged with good condition six days after surgery. At the time of discharge, no one had severe complication. **Conclusion:** As observed, repairing complete ureter avulsion can be considered as a safe and suitable procedure after complete evaluation.

#### INTRODUCTION

Recently in Techniques of urology many advancement have been occurred, one of them is endoscopic management of urinary stone disease, but this manipulations sometimes may be induced some complications which some time may be disaster (1-4). We have experience of 4 cases of complication during transurethral lithotripsy (TUL).

#### CASE PRESENTATION

Four cases including: a women with left ureter stone with age of 50 years old she had been treated by method of TUL but with complete avulsion of left ureter, second case a woman with age of 55 years old with history of diabetic and pemphigus and hypertension she had a 8 mm stone with right ureter and had been tried for stone by method of TUL and she had complete avulsion of right ureter, third case a man with 58 years with history of hypertension and left ureter stone with size of 8 mm and he had been tried by TUL and he had complete avulsion of left ureter, fourth case a women with age of 82 years old with history of hypertension and with a stone with size of 7mm at left ureter which had been tried by TUL and she had complete avulsion of left ureter. Just only the fourth case was from our department and other cases were from other than our department. All of them after evaluation and medicine at fourth day of administration operated first nephrectomy and after irrigation with cold solution (ringer lactate and heparin) and removed rest of stone and preparing Foss iliac for auto transplant and finally transplant carried out and in all of them DJ stent had been inserted, in all of them ureter anastomosed to bladder except in second case in whom renal pelvic anastomosed to bladder directly (pyelovesicostomy) and in the last one ureter ostomy was performed. Course of treatments were uneventful and all of them discharged 6 days after transplant and DJ had been removed after 4 weeks after complete follow up (IVP intravenous pyelography) and control for creatinine (Figure 1).



**Figure 1.** Left kidney Auto transplant in right iliac fossa in women with 82 years old

#### DISCUSSION

Urinary stone disease is not uncommon disease and it is told that 13% of population of worldwide will be experienced this diseases (1,2). Recently endourologic management of urinary stone indicated for treatment of urinary stone (3), but endourologic manipulation of ureter sometimes may have complications including stricture of ureter and perforation of ureter and avulsion of ureter (4), but if some conditions in using instrument don't be considered there will be more chance for complication for example the size of ureterscope

and using force in ureter by ureteroscope and recent extracorporeal shock wave lithotripsy (ESWL) or history of using corticosteroid and impact stone (5,6), and placement of stone in proximal ureter because thin muscles with wall of proximal ureter (7). Our presentation points that after complete avulsion of ureter a complete evaluation and stabilizing the patient and then making decision may be a good job. If there is severe pain and urinoma and obstruction with ureter percutaneous nephrostomy insertion maybe done. Auto transplantation of kidney in treatment of complete avulsion of ureter seems more effective and benign than placement small intestine and others (8-13). Immediately operation may be associated with some challenges including: it may increase the time of anesthesia which increases complication with patient especially with old patient, unavailable evaluation of kidney for the map of vessel which is very important for constructive nephrectomy and transplantation, impossible discussion with patient about treatment of complication and informed consent so the advantages of delayed intervention for complete avulsion of ureter are: 1-evaluation of patient (kidney evaluation) 2-make a fit and reasonable decision according the ability of center 3-discussion with patient and accompanied of him or her 4-reduce the time of cold ischemic time because with familiar the anatomy of pelvic and kidney it is possible after skeletonize the injured kidney before nephrectomy the fit pelvic (right side or left side) will be prepared for directly transplant with very short time of cold ischemic time.

## CONCLUSION

In complete ureter avulsion, delayed auto transplant may be safe and definitive treatment.

## ACNOWLEDGMENTS (Funding source)

None

## AUTHOR CONTRIBUTION

All authors wrote the manuscript equally.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## ETHICAL STANDARDS

Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authors.

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