

A NEW URETERAL RECONSTRUCTION TECHNIQUE PRESERVING INTRAMURAL URETER AND ORIFICE CONTINUITY

Introduction

In this video, we describe a new ureteral reconstruction technique to approximate the ureter when it has been destroyed or has to be removed because of the presence of a tumor.

Design

Case

A 63-year-old male presented to our department due to gross painless intermittent hematuria. MRU showed a 3,5 cm-long lesion at the lower third of the right ureter. Ureteroscopy showed a mass in the ureter. Pathologic analysis of the ureteroscopic biopsy identified low grade papillary urothelial carcinoma. We decided to perform right segmental ureterectomy

The description of the technique

The patient was placed in a supine position. Modified Gibson incision was performed on the right side. The ureter was identified and dissected proximally and distally. The tumor was palpated and the involved ureteral segment was excised. This excised ureteral segment was 5,5 cm in length. The next step was intravesical in order to provide an adequate length of the ureter. Hence, a U shaped incision was made under the orifice and extended approximately 3-4 cm laterally. Intramural ureter was detached from the bladder wall. The intramural ureter and the ureteral orifice was dislocated to the proximal end of the opening. This led to the extension of the extravascular ureter almost to 4-5 cm. To reposition the ureteral orifice conveniently, the proximally ends of the incisions were integrated and a longitudinal incision made amidst upwards. A ureteral stent was placed and the ureteral ends are spatulated and anastomosed with interrupted absorbable 4-0 sutures. Sufficient ureteral length enabling tension free anastomosis was provided. Finally, the ureteral orifice was located to the proximal of the incision and the several incisions were closed with 4/0 Polyglactin in the intravesical stage. Detrusor was closed over the repositioned ureter with a length of 4-5 cm using 3/0 Polyglactin. A perivesical drain was positioned laterally in the perivesical area.

Results

The postoperative period was uneventful. Micturating cystogram and IVU are performed 6 weeks after removal of stent to examine vesicoureteral reflux and ureteral obstruction. The cystoscopic evaluation revealed a natural orifice structure.

Conclusion

Segmental ureterectomy is offered for low grade tumors of the ureter that are not amenable to complete ablation by endoscopic means because of size or multiplicity. Direct ureteroureterostomy is performed only if a tension-free anastomosis is possible. Additional techniques such as a psoas hitch or Boari flap can be used when the wide ureter is removed. Our technique is preferable, instead of psoas hitch or Boari Flap in these cases. As the intramural ureter and orifice continuity is preserved, follow up with ureteroscopy and ureteral stent insertion can be performed conveniently. Since the orifice structure was not destroyed in our case, vesicoureteral reflux was not observed.

Specify source of funding or grant	no
Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Selcuk University
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes