Clam Ileoplasty Bladder Augmentation and Renal Transplantation

D. Milutinovic, C. Topuzovic, J. Hadzi-Djokic
Institute of Urology and Nephrology, Clinical Centre of Serbia, Belgrade

In our patient, with a small contacted blader and end stage renal failure, bladder augmentation (clam ileocystoplasty) was done in conjunction with renal transplantation. Our patient has stable renal and bladder function 46 months after kidney transplantation. Key words: small bladder, renal failure, kidney transplantation

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INTRODUCTION

Many patients with small-capacity, high-pressure, poorly compliant or unstable bladders will be managed successfully with pharmacological or other conservative measures. A minority of these patients will require surgical intervention. Augmentation cystoplasty may be used in patients with renal failure before transplantation because 15% of patients with end-stage renal failure have lower urinary tract dysfunction.

CASE REPORT

S.J., a 19-year-old girl with the partial sacral agenesis syndrome, had a neurogenic bladder with secondary vesi-coureteral reflux, recurrent urinary tract infections and chronic renal failure. Dialysis was started when she was 17 years old. A pre-transplantation cystogram showed small bladder capacity of 65ml and left secondary vesi-coureteral reflux (Figure 1). Urodynamic study revealed poor bladder compliance. Cystoscopy while patient under anesthesia documented a bladder capacity of 100ml. In May 2003 a clam ileocystoplasty was performed to increase bladder capacity along with left nephrectomy. After several weeks the patient was started on a bladder hydrodistension programme with clean intermittent catheterisation (Figure 2). In June 2003 the patient underwent an intraabdominal living related renal transplantation into the augmented bladder and right nephrectomy. Following catheter removal she was started again on clean intermittent catheterisation (Figure 3). At this point, creatinine level is stable at 150mol/l 46 months after renal transplantation. The patient is taking trimethoprim-sulfomethoxazole for antibacterial suppression therapy. She is on low maintenance immunosuppression doses of cyclosporine,
prednisone and azathioprine, catheterizes herself 6 times a day and has a bladder capacity of 300ml (Figure 4).

**DISCUSSION**

Ileocystoplasty has been used to enlarge the bladder and to improve bladder function in a wide variety of lower urinary tract disorders1,2. However, little attention has been given to ileocystoplasty in conjunction with renal transplantation in patients with a contractive bladder and end stage renal failure3. Thorough evaluation of the lower urinary tract is done in an attempt to predict the success of adjunctive procedures for rehabilitation of the bladder4. This evaluation includes cystourethroscopy, voiding cystourethrogram and cystometrogram. If a bladder is contracted and non compliant return of adequate function with transplantation is unlikely. In these cases adjunctive procedures or bladder rehabilitation should be considered before renal transplantation, including ileocystoplasty, clean intermittent catheterization, progressive preoperative hydrodistension, pharmacological treatment, sphincterotomy or artificial sphincter placement. Compared to other augmentation procedures clam ileocystoplasty minimizes suture line length and the chance for urinoma. Clean intermittent self-catheterization is reasonable and safe in renal transplant patients with voiding dysfunction who are well motivated5.

**CONCLUSIONS**

Augmentation enterocystoplasty is now the method of choice is managing patients with small capacity, poorly compliant or hyper-reflexive bladder. A low-pressure reservoir with a large capacity is ideal. Our experience suggests that every effort should be made to keep the lower urinary tract intact, even if bladder reconstruction with a bladder augmentation procedure is required.

**SUMMARY**

Kod bolesnice, sa malom skvrćenom mokraćnom bešikom i potpunim otkazivanjem funkcije bubrega, učinjeno je uvećanje mokraće bešike (našivanjem tankog creva u vidu kape), a nakon toga je urađena transplantacija bubrega. Bolesnica ima stabilnu funkciju transplantiranog bubrega i uvećanje mokraće bešike 46 meseci posle transplantacije.

Klučne reči: mala bešika, otkazivanje funkcije bubrega, transplantacija bubrega.

**REFERENCES**


FIGURE 4.
Cystogram after 46 months shows a bladder capacity of 300ml.