

BLADDER ENTEROCYSTOPLASTY AND RENAL TRANSPLANTATION

Hypothesis / aims of study

To evaluate enterocystoplasty prior to renal transplantation as an alternative for patients with low capacity / low compliance bladder.

Study design, materials and methods

Fifteen end stage renal disease (ESRD) patients in hemodialysis program have been evaluated. There were 13 men and 2 women with age varying from 20 to 48 years (mean 34 years). All of them presented a low capacity (mean volume 163 ml) and low compliance bladder (mean 4,01 ml/ cm H₂O) before transplantation.

All patients were previously trained by a nurse to perform clean intermittent self catheterization.

Surgical approach was achieved by Clam's ileocystoplasty in 13 patients, Hautmann's intestinal orthotopic reservoir in one patient and a non orthotopic continent ileal reservoir in one patient. Renal transplantation was performed with cadaveric graft in 7 and living donor kidney in 6 patients. There are 2 patients still awaiting for kidney transplantation.

Results

In the post operative evaluation, there was an improvement in both maximum cystometric capacity (mean 400 ml) and bladder compliance (mean 36,9 ml/ cmH₂O) was observed.

Occurrence of symptomatic urinary tract infections was restricted to 2 - 3 episodes/ year.

Among the patients who have already undergone renal transplantation only one had an unfavourable evolution due to a fungal infection. In spite of the absence of a control group the remaining patients had a similar renal function evolution compared to patients that did not need bladder augmentation prior to kidney transplantation.

All patients are continent but must perform clean intermittent catheterization in order to achieve adequate bladder emptying.

Interpretation of results

Once bladder augmentation was accomplished way before renal transplantation in some cases, it was a major concern to keep the reservoir functioning until then. Patients were instructed to perform reservoir distension once daily by injecting 300 ml of sodium chloride 0,9% between clean intermittent catheterization. Only one of the bladder augmented patients who has not been undergone renal transplantation yet had an adverse evolution due to improper management of the reservoir as mentioned before.

Urinary tract infections do not seem to be more frequent in pretransplantation bladder augmented patients (2 - 3 episodes/ year) excluding the cases that present as asymptomatic bacteriuria.

Clean intermittent catheterization is paramount for adequate management of the reservoir in the post transplantation period since it promotes complete emptiness of bladder.

The follow up showed the equivalent efficacy of renal graft in this special population comparing to usual renal transplantation candidates. Nevertheless, only one renal failure occurred so far due to an obvious infectious cause.

Concluding message

Enterocystoplasty has proved to be an adequate method for lower urinary tract reconstruction in ESRD patients with low capacity and low compliance bladder who are candidates for renal transplantation. It apparently neither implicates in infectious complications nor compromise the adequate evolution of renal graft.

FUNDING: NONE

DISCLOSURES: NONE

HUMAN SUBJECTS: This study did not need ethical approval because It was a retrospective study but followed the Declaration of Helsinki Informed consent was not obtained from the patients.