

EVALUATION OF BLADDER FUNCTION BEFORE AND AFTER RENAL TRANSPLANTATION IN PATIENTS WITH CHRONIC RENAL FAILURE NOT CAUSED BY UROLOGIC DISEASE

Hypothesis / aims of study

Regardless of the diagnosis of primary renal disease, most patients with chronic kidney disease (CKD) progresses with gradual reduction in urinary output, reaching, in many cases the anuria during dialysis. This lack of diuresis is associated with the development of defunctionalized bladder. After successful kidney transplantation, recovery takes place diuresis with partial or complete recovery of bladder function.

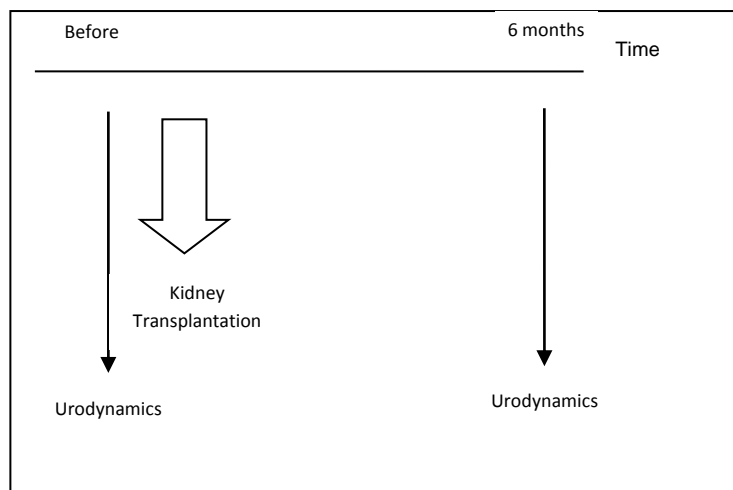
Few papers has been published on the bladder function of patients with and without defunctionalized bladder not caused by urologic disease. We know that patients reduce bladder capacity after years of absence or reduction of diuresis, but apparently, this capacity is partially or completely recovered after the return of urine output provided by the transplant. The urodynamic study is considered the gold standard for assessing bladder function.

This research aims to evaluate, through urodynamic parameters, bladder function in patients with CKD not caused by urological disease, before and after surgery of renal transplantation.

Study design, materials and methods

Urodynamics was performed immediately before transplantation in 30 adult patients that are on dialysis program for a period longer than one year and had 24 hour diuresis less than 1000ml. New urodynamics was conducted six months after the transplant, in that patients wich success were obtained and maintained in renal transplantation surgery.

Patients with chronic renal failure caused by urologic disease were excluded from study.



Results

30 patients performed urodynamics after transplantation. Altogether 11 patients were female and 19 male patients. The mean age was 46 years (18-66). The average duration of dialysis before transplant was 57 months (13-168). The maximum cystometric capacity before was an average of 221ml compared to 428ml after transplantation ($p < 0,0001$). The percentil of increase in capacity was on average 139%, reaching in excess of 500%. There also was improvement in all others urodynamic parameters after transplantation (sensation, first desire to void, compliance, maximum flow rate).

AVERAGE VALUES			
	Before	After	p-value
First sensation (ml)	88.8	169.7	0.0005
Fisrt desire (ml)	137	251	<0.0001
Compliance (cmH20/ml)	73.9	138.6	0.03
Maximum Flow Rate (ml/s)	8.1	15.8	<0.0001

Maximum Cystometric Capacity (ml)	221	428	<0.0001
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Interpretation of results

Normalization of urodynamics parameters after completion of the renal transplant shows the recovery of defunctionalized bladders of patients with chronic renal failure not caused by urological surgery.

Concluding message

The results favor that urodynamic evaluation IS NOT necessary prior to transplantation in patients with defunctionalized bladder not caused by urologic disease, since the recovery of bladder function after normalization of diuresis with the transplant was clearly demonstrated.

References

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<i>Specify source of funding or grant</i>	none
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Committee of ethics of the State University of Campinas - UNICAMP
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes