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BLADDER DYSFUNCTION AFTER SIMULTANEOUS PANCREAS-KIDNEY TRANSPLANTATION

Hypothesis / aims of study

The simultaneous pancreas-kidney transplantation (SPKT) is a therapy that provides long-term improvement in quality of life and possible stabilization or improvement of secondary diabetic complications. Urodynamics evaluation performed in 71 patients on SPKT waiting list (previous presented) showed high index of bladder disorders, in accordance to habitual consequences of diabetic neuropathy. We performed urodynamic evaluation on patients following SPKT in order to analyze the bladder behavior before and after the surgery.

Study design, materials and methods

Ten uremic and diabetic patients (7 women and 3 men), mean age 37 y.o. were submitted to videourodynamic examination comprising uroflowmetry, cystometry, EMG and pressure-flow study (Aquarius Laborie Medical Corp.), 12 to 39 months (mean: 22 mo) after SPKT. All transplants were performed using pancreas enteric drainage. Results were compared to the pre transplant urodynamic findings.

Results

Nine patients (90%) presented urodynamic abnormalities on preoperative evaluation: reduced bladder capacity (40% of them), reduced bladder sensation (30%), detrusor underactivity (70%), low compliance (10%) and high post void residual (40%). Urodynamic evaluation after SPKT showed: reduced bladder capacity (10%), reduced bladder sensation (20%), detrusor underactivity (40%), high post void residual (30%) and one patient (10%) presented detrusor overactivity. The major urologic complication was urinary tract infection (40%).

Urodynamic findings in 10 patients pre and post SPKT

	Pre SPKT	Post SPKT
Reduced bladder capacity	40%	10%
Reduced bladder sensation	30%	20%
Detrusor underactivity	70%	40%
High post void residual	40%	30%
Low compliance	10%	-
Detrusor overactivity	-	10%

Interpretation of results

Abnormal urodynamic findings improved after SPKT, especially bladder capacity and detrusor contraction.

Concluding message

An improvement on bladder parameters should be expected in patients after SPKT probably due to bladder functionalisation and improvement of diabetic secondary complications, such as neuropathy. The high incidence of urinary tract infections is a concerning complication in these patients.