

DYSFUNCTION OF THE LOWER URINARY TRACT AFTER RENAL TRANSPLANTATION IN CHILDREN

Aims of Study

Renal transplantation is nowadays a common treatment of children with end-stage renal failure.¹ However, for the young child the optimal management is difficult to determine. Policy in our University Medical Centre is to defer transplantation until the child weighs at least 12000 grams. Therefore, these children require renal replacement therapy and will have to undergo haemodialysis or peritoneal dialysis. In children with end-stage renal failure, the amount of urine produced can still be normal, but usually it is found to be strongly reduced. Children will therefore hardly, if at all, make use of their lower urinary tract at the time of transplantation. In a previous study, we found that resumption of bladder function after renal transplantation does not always go smoothly and that in the first year after transplantation

adult renal transplant recipients needed to void significantly more often during the day and during the night than control patients². It is assumed that in children the same complications and hydronephrosis may occur. Moreover, End-Stage Renal Disease (ESRD) in children is caused by dysfunction of the lower urinary tract in 20 to 40 % of the cases^{3,4,5,6}. Particularly, in children who's bladders have become thick-walled

as a result of an obstruction of the bladder outlet or urethra it is assumed that lower urinary tract symptoms after transplantation might develop^{7,8}. Detailed information on the prevalence and nature of the lower urinary tract symptoms after renal transplantation in children is not available. This study is meant to fill this gap.

The function of the lower urinary tract was examined in a group of children before and after renal transplantation. In addition we examined the function of the graft.

Methods

Data were gathered successive by the medical record, written questionnaire, frequency-volume charts and, flow measurement and ultrasonography. The research group consisted of 13 girls and 15 boys (N=28), age 5 to 18 year, who underwent renal transplantation at an University Medical Centre in The Netherlands.

Results

The preliminary results show that after renal transplantation, almost 25% of the children complained about frequency and 54% about nocturia. Almost 50% of the children had one or more LUTI. About 15% suffered from urinary incontinence and almost 30% suffered from enuresis nocturnal. Regarding the evacuation function of the bladder, 50% of the children said to have hesitancy, 24% straining, 12% intermittency, and 27% bladder pain successively. The data collection of flow measurement and ultrasonography will be completed by the end of May.

Conclusions

After renal transplantation symptoms of dysfunction of the lower urinary tract in children are common. Because of the diversity of the symptoms the most appropriate treatment for these children is to offer them an individual program.

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