

## LONG TERM FOLLOW UP INTO ADULTHOOD OF BOYS OPERATED FOR HYPOSPADIAS. A STUDY INTO FUNCTIONAL AND COSMETIC RESULTS.

### Hypothesis / aims of study

The aim of the study was assessment of long term results after hypospadias surgery in childhood with respect to voiding function, erectile and ejaculatory function, quality of intimate relationship and cosmetic appearance in adult men.

### Study design, materials and methods

Between January 1987 and January 1992, 116 patients, now adults, were operated for hypospadias in our institution. Ninety-one of them could be traced and were included in this study. Patients were asked to complete questionnaires on the International Prostate Symptom Score (IPSS), International Index of Erectile Function (IIEF), the Nederlandse Relatie Vragenlijst (NRV, Dutch Relationship Survey) as well as additional questions. Cosmetic results were assessed using the Hypospadias Objective Penile Evaluation (HOPE) score and uroflowmetry with post void residual measurement by ultrasound was performed. As a control group, 151 male medical students filled out the questionnaire (IPSS and IIEF) and underwent uroflowmetry.

Acquired data was analyzed using SPSS 12.0. Data analysis was done by Students' T-test, Chi-square test, ANOVA, Pearson's and Spearman's rank correlation with a p-value <0.05 considered significant.

### Results

The questionnaires were returned by 66 of 91 patients (73%) and 31 (47%) visited the outpatient clinic for examination. Mean age was 22.1 (±3.6) compared to 21.8 (± 3.0) in controls. Forty seven patients had distal, 8 had midshaft and 11 had proximal hypospadias. Eighty six% of patients and 93% of controls had IPSS ≤ 7, 12% of patients and 7% of controls had IPSS 8-19 (p=0.049) and 2% of patients had IPSS ≥ 20. Spraying was significantly more often reported by patients than by controls (p<0.00). Mean Q-max, voided volume and voiding time did not differ between patients and controls. Although in general peak flows were good, significantly more patients had peak flows below the 95 percentile.

The IIEF only showed a significant lower value of orgasmic function in the hypospadias group and masturbation was done less frequently compared to controls. Satisfaction of penile length was lower in the hypospadias group in proximal hypospadias. Mean stretched penile length was 12.1 cm in whole group and 10.8 cm in proximal hypospadias. In general the cosmetic outcome was considered good by both patient and observers. The NRV was completed correctly by 33 patients. Low self esteem was more prevalent in patients with multiple reconstructive surgeries.

### Interpretation of results

Young adult patient operated for hypospadias in childhood more often complain of weaker stream and more have mild lower urinary tract symptoms (IPSS) than controls. Uroflowmetry, however, shows no difference with controls. Cosmetic outcome is good and psychological development is not disturbed in hypospadias patients.

### Concluding message

Outcomes of hypospadias surgery show could results on the long term with respect to voiding function, erectile function and cosmesis

<b><i>Specify source of funding or grant</i></b>	<b>No funding.</b>
<b><i>Is this a clinical trial?</i></b>	<b>Yes</b>
<b><i>Is this study registered in a public clinical trials registry?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Ethical Committe of the University Medical Center Utrecht, Utrecht, The Netherlands</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>Yes</b>