

## RESULTS OF BEHAVIORAL THERAPY COMBINED WITH HOMEFLOW BIOFEEDBACK FOR NON-NEUROPATHIC BLADDER SPHINCTER DYSFUNCTION, A PROSPECTIVE RANDOMIZED STUDY IN 143 PATIENTS

### Aims of Study

Current treatment of patients with non-neuropathic bladder sphincter dysfunction (NNBSD) consists mainly of behavioral therapy. Recent studies show the importance of attention to the problem as a major factor for good results. Many tools for biofeedback training (BT) with comparable results have been reported. A 3arm randomized study was done to compare 1. Standard outpatient behavioral therapy. 2. Standardized extra attention for the child's problem. 3. The use of a new developed homeflowmeter for BT. Aim of the study was to get insight in the effect of BT interventions compared to attention.

### Methods

143 patients (age 5.14 yrs) with urodynamically proven NNBSD resulting in recurrent UTI's, mostly combined with incontinence and fecal soiling, were included. 1. Standard training consists of explanation of NNBSD to the patient and the parents, instruction on toileting position, instruction on management of fecal constipation by training and laxative therapy, uroflowmetry and ultrasound measurement of residual urine at outpatient clinic visits (n=44). 2. Instruction in a 9 minutes video with explanation of NNBSD and toilet habits ending with a life video recorded personalized session of the urotherapist with the patient. Patients are instructed to view the tape every day (n=46). 3. The homeflowmeter gives direct visualisation of the produced flow curve on a hand-held computer. BT instructions and ideal curves were given on a video after first instructions by the urotherapist (n=53). All groups received their study interventions during the first 8 weeks of a half-year training program. Visits, instructions and telephone contact with the urotherapist were equal for all. Six months after inclusion prophylactic antibiotics were stopped and patients were followed for another 6 months with special interest for UTI's, incontinence and uroflowmetry with residual urine assessment.

### Results

Results at 6 months follow-up	1. standard	2. Video	3. homeflow
Free of infection without propylaxis	72%	48%	56%
achieved daytime continence	46%	54%	61% *
improvement of flow curves	53%	60%	48%
residual urine less 10% of capacity	60%	77%	73%

\*=significant

### Conclusions

Continence improves best in the homeflow group (3) compared to the results of standard training (1) and video (2). Flow curves and residual urine improve more in the video group but not significant. Probably recurrent UTI's are best treated with standard training, also not significant. This study proves that attention for the child's problem remains the most important factor.