

VALUE OF AN INTENSIVE IN CENTRE TRAINING PROGRAM (VOIDING SCHOOL) IN CHILDEN WITH THERAPY RESISTANT LUTS

Hypothesis /aims of study

This study is a retrospective evaluation of the effectiveness of voiding school in children with refractory bladder dysfunctions and/or incontinence. Voiding school is a multidisciplinary inpatient bladder training program (2 times 5 days) consisting psychological counseling combined with pelvic floor therapy, including manual testing, relaxation and uroflow biofeedback, adequate toilet posture and an individually adapted drinking and voiding schedule

Study design, materials and methods

Retrospective study 10-year of an inpatient voiding program for this children with refractory bladder dysfunctions. Study-population n= 380, 5-19 years, mean duration of treatment in the tertiary enuresis centre, before intake was 2.7years. Data has been collected at 6 periods of time (1st consultation, start voiding school, completion voiding school and 3, 6 and 12 months after voiding school).

Results

Screening characteristics : 90.2 % urge syndrome, 19,4 % soiling, 19.4 % had ADHD, ASS, or psychiatric conditions or mild mental retardation. When comparing voiding scores of urge syndrome at completion and 3,6 & 12 months after voiding school with the voiding scores at the entry of voiding school, a highly significant improvement of the voiding scores are demonstrated, at both daytime incontinence as enuresis ($p < .0001$). The estimate improvement, corrected for various variables, account for respectively daytime incontinence and enuresis: 16,5 %/12,8 % improvement at completion voiding school, 31,0 %/24,7 % 3 months, 37,2 %/35,3 % 6 months and 36,9 %/37,3 % 12 months after voiding school. Statistical analyzes demonstrated that the outcome of voiding school is depending on sex, age and nocturnal polyuria. Boys with urge syndrome had worse outcome at enuresis frequency ($t(1429)=4.93$, $p < .0001$) and maximal voiding volume ($t(1027)=-3.59$, $p=0.0003$). In contrast, the performances at daytime incontinence are independently of sex ($t(1429)=-0.62$, $p=0.5360$). Furthermore we found significant effects of age indicating that children younger than 9.64 (the average age at entry of the voiding school in the population sample) had worse performance at both daytime incontinence and enuresis (respectively $t(1429)=-7.50$, $p < .0001$; $t(1429)=-5.09$, $p < .0001$). In contrast, age has no influence on the maximum voiding volume ($t(1027)=-0.95$, $p=0.3410$). The occurrence of nocturnal polyuria was also associated with significant worse results for enuresis ($t(1429)=3.32$, $p=0.0009$) but had no impact on maximal voiding volume ($t(1027)=1.07$, $p=0.2830$). The duration of the ambulatory treatment and the presence of psychiatric co-morbidities do not affect the outcome of voiding school at both frequency of daytime incontinence, enuresis and maximal voiding volume.

Interpretation of results

This retrospective research demonstrated additional that the outcome of voiding school is being influenced by sex, age and nocturnal polyuria. Although this inpatient training program is a time-consuming and expensive treatment option, it is a considerable good option for children with refractory bladder dysfunction and therefore it should be reserved for this children with a high risk of persistence of symptoms into adult life.

Concluding message

Voiding school is a successful strategy for children with therapy-resistant bladder dysfunctions and/or incontinence, resulting in an improvement of daytime incontinence and enuresis and an increase in maximal voiding volume.

Specify source of funding or grant	No
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Ethical commity UZGhent
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No