

outcome in regard to upper urinary tract preservation and the achievement of continence among children whom we followed since birth or since early childhood and in those who were referred to us after 2 years of age, and (B) if there is a difference in regard to the necessity of operative treatment vs. conservative treatment between these groups.

**Methods:** in 163 patients, 71 (43 %) females and 92 (57 %) males, mean age upon the last control 19 yrs., mean observation time 12 yrs., the initial findings and the findings upon the last check-up were compared. For this retrospective study the patients were categorized as follows: (I) first urological investigation/treatment after birth up to 2 years, (II) between 3 and 10 years, (III) after 10 years of age; patients in groups II and III were referred from elsewhere. Evaluation of the upper urinary tract comprised renal isotope-studies, an IVP and/or ultrasound study, in regard to continence/incontinence patients were categorized in continent (dry day and night), continent during day only, „socially dry“ (dry periods more than 3 hours) and incontinent (dry periods less than 3 hours).

**Results:**

A) **Upper urinary tract:** initial findings normal, in (I) 91 %, in (II) 80 %, in (III) 82 %; normal during the last follow-up, in (I) 100 %, in (II) 86 %, in (III) 95 %; operative treatment to achieve the results was needed in (I) in 16 %, in (II) in 34 %, in (III) in 59 %.

B) **Continence/incontinence:** of 123 pat.s suitable for this evaluation 67 (37 females, 30 males; 54 %) were continent, 4 (1 female, 3 males; 3 %) were continent during the day, 22 (11 females, 11 males; 17 %) achieved the status of „socially dry“ and 31 (7 females, 24 males; 26 %) remained incontinent; in 50 % continence was achieved by conservative treatment only, in the other 50 % operative treatment was needed; in 28/34 a Scott-Sphincter was implanted, in 14/28 together with augmentation cystoplasty.

**Conclusions:** Early urological management, if possible starting directly after birth, as it is usually done in spinal cord injured patients, is the best guarantee for preservation of a normal upper urinary tract (100 % in group I), moreover it lowers the need for operative treatment. In 74 % either continence or the status of „socially dry“ could be achieved, half of the patients with conservative treatment only, in the other half with the help of operative treatment by implantation of a Scott-sphincter, partly in combination with augmentation-cystoplasty.

## 122

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

DIFFERENT ASPECTS OF PERSONAL, FAMILY AND SOCIAL SITUATION IN THREE GROUPS OF CHILDREN WITH A DIFFERENT OUTCOME OF BLADDER CONTROL.

**Aims of study** This study has two major aims:

1. To evaluate the social and family situation, personal habits and micturition habits and the methods used for dry training in children by means of a questionnaire;
2. To compare the results in children with and without lasting problems of bladder control.

**Methods** A questionnaire of 43 questions was developed: 12 questions evaluate the family situation and the personal data of the child; 17 are about the micturition behaviour and about the methods used for dry training; 14 document eventual lasting bladder disorders. This questionnaire was answered at home, without help of the investigators, by parents of schoolchildren. Exclusion was the existence of a neurological disease. In order to test the reliability of the answering a large group of parents were asked to fill in the same questionnaire with an interval of 6 months. The correlation was evaluated with the Kappa test. Other analysis were done with non-parametric tests;  $p < 0,05$  was considered as statistically significant.

**Results** A total of 140 questionnaires were obtained. The studied population was divided in 3 groups: Group A 50 children who had undergone a urodynamic

## 534 Abstracts

test during the last 2 years. Group B 23 children who had bladder problems but no urodynamic test; only 6 of them had consulted a health carer. Group C 67 children without any symptoms.

Boys/girls distribution was similar in all groups. Their mean age was 11.5 years old.

In group A significantly more children had relatives in the previous generation with enuresis beyond the age of 7. More children in this group had cousins and nephews with continuing problems of bedwetting at the time of the interview.

In the symptom groups (A+B) the ability to take responsibility for personal hygiene and for homework was lower. A high number of children in these groups did not take part in any extra-scolar activity. No difference in level of class or school results were found and the family situation was identical in all groups.

The repeated answering proved very reliable (no level of agreement below 0.74 and most = 1).

Parents in the symptomfree group C seemed to start the dry-training earlier. Significantly more children were dry during the afternoon nap in group C at start. Parents from group C used less different methods than those from the symptom groups. In group C more parents did not insist when an attempt to void was unsuccessful, 3 % invited the child to push and 13 % opened the tap. In the symptom groups 25 % asked to push and 20 % opened the tap.

Parents in groups A+B were more ready to punish (17% compared to 1%).

We found a good correlation between LUT symptoms and bladder dysfunction.

It was surprising that 70% of the parents considered their children to be continent in spite of several leakages a day.

Conclusions The questionnaire used in this study has given interesting data. There seems to be a very good correlation between real dysfunction and dysfunction suggested through questionnaire. Children with and without LUT problems would seem to be different in hereditary factors, general independence and the age when their training started. It is remarkable that many children with lasting problems of bladder control did not consult a health carer.

## 123

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

THE EVOLUTION OF TOILET-TRAINING DURING THE LAST 60 YEARS: CAUSE OF AN INCREASE IN LOWER URINARY TRACT DYSFUNCTIONS?

Aims of study To analyse the evolution of toilet training methods in children in the last three generations and to search for a possible cause for increase of lower urinary tract dysfunctions.

Methods A questionnaire of 25 questions, previously validated, was handled out to persons in public places together with a letter explaining the purpose of the study. The questionnaires were recollected via a special mail box and by personally picking them up. The first 10 questions were about the personal, social and family data. The next 9 questions were specific about the potty