Results

Of the total group of 40 children 27 were considered responder after 1 month of trial therapy. On their voiding diaries, increase in bladdercapacity, decrease of urge, decrease of incontinence or better sensibility were noted. Of the 13 non-responders, 11 were boys. Motivation problems were often encountered among these boys.
The results can be evaluated in 23 children (11 girls, 12 boys), who underwent stimulation minimally during 3 months.
In all patients a better bladder sensibility is observed which leads to better control of incontinence. They feel urge better and can respond more adequate by going to the toilet.
In those patients who suffer incontinence during night (23) there is decrease in nighttime incontinence in 6.
In the responding patients significant increase in functional bladder capacity was seen in 15, urge decreased in 14, and daytime wetting decreased in 8 (out of 16 suffering daytime incontinence). Most patients respond well to the 2 Hertz stimulation. Only 4 patients changed to 80 Hertz stimulation.
Adverse effects were not observed.
Only 4 patients have terminated stimulation after 6 months of therapy and have a minimal follow-up of 3 months to evaluate. In 3 out of them results are definitive. One patient relapsed after termination. Another 4 patients continue stimulation after 6 months. They were the first patients to start therapy and therefore are the hardcore group. In those we taper therapy and let patients stimulate every other day.

Conclusion

Although preliminary, the results of this study show that transcutaneous neuromodulation can improve symptoms of detrusor overactivity. In 67.5 % response on stimulation is seen. We have to wait for the long-term results before starting it as first choice therapy. Especially in children it is an attractive therapeutic option, seen the non-invasiveness and the absence of adverse effects.

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Urodynamic pattern in asymtomatic infant siblings to children with vesicoureteral reflux

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The significance of bladder dysfunction in infants with various urinary tract disorders is uncertain due to the lack of knowledge about the urodynamic pattern in healthy infants. The aim of the present study was to evaluate the urodynamics in sibling infants screened for vesicoureteral reflux (VUR) by combining cystometry and perineal electromyography (EMG) with voiding cystourethrography (VCU) thereby obtaining information about infants without as well as with VUR.

Material A total of 37 infants were enrolled. They were asymtomatic siblings of children with VUR referred for investigation of hereditary reflux. 31 infants, 12 males (median age 0.7 months) and 19 females (median age1.2 months), were without reflux at the investigation and those are the children included in the study.

Results Unstable contractions were seen in 1/12 (8%) of the male and 3/19 (16%) of the female infants. The detrusor contraction found in the male was strong and isolated looking more like an aborted voiding but without leakage of urine.
Median bladder capacity was 20 ml. in both male and female infants (range 10-49 and 10-120, respectively).
Premature voiding was seen in 3 female infants at low infused volume of 4, 5 and 7 ml. with peak voiding pressures of 70. 80 and 102 cm.water. In these cases filling was continued until another voiding occurred.
Median peak voiding pressure was 127 cm. water (84-211) in male and 72cm.water (42-240) in the female infants. The voiding contraction was bi- or polyphasic in 11/12 males and 18/19 females. The bi- or polyphasic appearance of the voiding contraction was directly related to the intermittency of the EMG activity with increase in detrusor pressure simultaneously with increase in pelvic floor activity.
Conclusion By performing cystometry together with voiding cystourethrography in asymtomatic infants screened for VUR, we have obtained data on the normal urodynamic pattern in infancy. These infants only rarely had unstable contractions and the bladder capacity was lower than expected with predicted value at birth of about 20 ml. The peak voiding pressure was high and significantly higher for males. Most infants showed increased EMG activity during voiding. The urodynamic pattern suggests a physiological dyscoordination probably due to immaturity of the detrusor-sphincter function.

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EFFICACY OF A CHILDHOOD INCONTINENCE CARE PROGRAMME IN IMPROVING THE QUALITY OF LIFE IN CHILDREN WITH INCONTINENCE PROBLEM

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Urinary and/ or faecal incontinence in children are common but often neglected problems in a Chinese community. The aim of this study is to determine the efficacy of a Children Incontinence Care Program in improving the quality of life of children with incontinence problems.
Method: 186 children (117 male, 69 female, mean age 7.8 years) with faecal and/or urinary incontinence were managed each with an intensive and individualized incontinence care programme. Of these, 52 had spina bifida, 79 had enuresis, 27 had anorectal anomaly, 16 had Hirschsprung disease and 12 had intractable constipation. The entire programme consists of specially designed educational programmes; diagnostic laboratories for children; innovative therapeutic programmes; bowel management programme, clean intermittent catheterization programme; parent support group and community network that were supervised by dedicated nurse specialist, paediatric surgeons and urologists. The patients were followed up for an average of 1.5 years (range 0.5 to 3.9 years). The children were divided into 3 groups: Group 1 (85) had urinary incontinence only, group 2 (54) had faecal incontinence only and group 3 (47) had double incontinence. They were all investigated with respect to psychosocial and behavioral problems using self-structured Clinical Incontinence Score (CIS), interviews and Achenbach's Child Behavior Check List (CBCL) before and after the treatment.
Results: Because of the incontinence problem, over 90% of children complained of unhappiness, depression, worries and were dependent and/ or attention seeking before treatment. While 63% of children had problems in peer relationship and fear to go to school, 50% of children had poor school work performance. Based on CBCL, all children had various degree of psychosocial and behavioral problems (86% mild; 13% severe) before treatment. 20% to 33% of group 1 and 2 children have poor pre-treatment CIS. In contrast, 90% of group 3 children have poor pre-treatment CIS. After treatment, 92% of group 1, 85% of group 2 and 77% of group 3 children can keep clean and dry with significant improvement in CIS (Table 1).