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ERIC Campaigns Update

Nickie Brander, ERIC Campaigns' Organiser

Regulations for schools

The year ended on a very disappointing note. Jim Knight, the Schools Minister, has decided not to make any changes to the water and toilet sections of the School Premises Regulations. The sad fact is that many thousands of children and young people are condemned to many more years of depressingly inadequate provision.

ERIC has been trying for eight years to get the Education (School Premises) Regulations 1999 (SPRs) revised. The SPRs are the only legislation on drinking water (recent legislation has added that the supply of drinking water should be free of charge) and the only legislation on toilets in schools; but are inadequate and need revising. They are limited in what they can cover i.e. they are only general requirements for premises, rather than ensuring maintenance (e.g. cleaning) or management (e.g. when pupils are allowed access to the toilets). So while they do not have the capacity to deal with all the issues that are important for pupils, they are nonetheless the only legislation that exists or is likely to exist for a very long time. The ideal is additional bespoke legislation, but this is highly unlikely.

Drinking water: One tap or fountain in the toilets for all the children, which may number more than two thousand pupils in secondary schools, is perfectly legal as the SPRs only require a 'wholesome supply of water for domestic purposes including a supply of drinking water'.

Toilets: Cubicles without a lock (or even doors, as is currently the case in one boys' secondary school), no toilet seat or paper, no sanitary disposal for girls, no soap or hand drying facilities are all common deficiencies -and legal, as the SPRs merely prescribe a minimum number of toilets and washbasins.

Comparing adult and children's facilities: Unlike Health and Safety legislation concerning toilets for adults in the workplace, including staff in schools, regulations for pupils do not cover their suitability, accessibility, privacy, cleanliness, hygiene, or the provision of hot and cold water, soap or hand drying facilities. Health and Safety legislation only applies to adults— pupils are exempt from the legislation as well as the powers of the Health and Safety Executive and their inspectorate.

While an increasing number of schools are recognising the importance of providing good drinking water and toilets for their pupils, there appears to be a sizeable number of schools unable to fund refurbishment of toilets or the provision of drinking water, or who neglect their toilets or drinking water and are unwilling to do anything that is not laid down in legislation.

In answers to Parliamentary Questions and in personal correspondence, repeated promises were made that the deficiencies in legislation would be addressed. The Department for Children, Schools and Families (DCSF) invited Nickie Brander, on behalf of ERIC, to join the working group on legislation and to draft new legislation. Sadly, the much-needed legislation is not seen as a high enough priority. There is also the fear of cost - not wanting schools to incur extra costs remedying the deficiencies or the fear of being asked for more money.

The next step: ERIC has been taking advice on how to proceed. In the first instance, ERIC is contacting MPs who have worked with us in the past to ask questions in Parliament and to write to the Minister. We will then step up the lobbying - at that stage ERIC may call on supporters to get involved.

Let ERIC know about your experiences: ERIC was contacted in November by a Consultant Paediatric Urologist, who was spokesperson for a group of health professionals in the NE of England. He reported that many young patients who attend their clinics are unable or unwilling to follow their treatment plan on good hydration and toilet habits. Either the school toilets are repellent or access is restricted, which in turn decreases the willingness to drink during the day. The group considers that schools, local authorities and MPs do not understand the effects of poor toilets and do not consider school toilets to be a problem worthy of attention.

ERIC would like to hear from you. Please let us know whether there are similar problems in your area so that we can determine how widespread the problem is. We welcome any clinical case studies that we can use to show the effects and also any quotes. For more information please contact Nickie Brander by email at nickie@brander.org.uk.

School Toilet Award

Last year ERIC introduced the School Toilet Award at three levels to encourage schools to fulfil the ERIC Bog Standard Charter – which sets out minimum standards for toilet provision and access at all times for pupils in schools. ERIC offers the Award to schools through the Government's Healthy Schools Programme and it is currently being piloted in Sandwell, Derbyshire, Sunderland, Hull, Sefton, North Yorkshire and Northamptonshire. Twenty five schools have now gained the award, mostly at Gold Level. It can take schools from several months to a couple of years to raise standards sufficiently to gain the Gold Award. The stumbling blocks to achieving the Award range from the number of toilets and washbasins, to the requirement for toilet lids or sanitary disposal units in each girl's cubicle, to the requirement for at least two cleans a day. ERIC has received a lot of interest from schools outside the pilot area wanting to gain the Award; this is a positive indicator for the national launch of the Award.

Before the Award can be taken further, ERIC needs to carry out a review and set up an online facility where Healthy Schools teams and schools can register, find further information and resources, fill in audit forms, submit their evidence and apply for the Award. This will make tracking and managing schools and Healthy Schools teams much easier. However, more funding is required for this to happen.

Workshop session: Part of the Award involves pupils managing and improving their school toilets. Implicit in the long term success of the Award is teaching children appropriate behaviour in school toilets, to respect each other and make going to the toilet a more comfortable experience for themselves and for others; including discouraging peering over or under cubicles, hanging around toilets in groups and silly pranks such as 'tissue bombs' (throwing wet toilet paper at the ceiling), developing the habit of flushing the toilet after use, washing hands and reporting problems.

ERIC has developed two workshop sessions for Healthy School teams to teach primary pupils the basics of how food and drink is digested, how the bladder and bowel work, and what children can do to promote healthy bladders and bowels. The second session encourages pupils to think about appropriate behaviour and what they and the school can do to make going to the toilet a more comfortable experience. The materials will be piloted in 2009.

Prototype Toilets

Working alongside the Department for Children, Schools and Families (DCSF), London Borough of Havering and architects Walters and Cohen, ERIC has been working to pioneer higher standards in the provision of school toilets and to encourage open access to them. Two secondary schools in Havering have opened new toilets, designed and fitted to the specifications of the Standard Specifications, Layouts and Dimensions (SSLD) guidance on school toilets, issued by the DCSF in 2007 and titled 'Toilets in Schools'.

Alongside the new toilets, the DCSF has asked ERIC to help monitor the toilets for 12 months to investigate to what extent the investment in exemplar pupil toilets results in the expected beneficial affects for pupils. We will report on these toilets, our involvement and the findings after they officially open.

Sponsors

Without funding from our sponsors, the ERIC Bog Standard Campaign would not be able to continue. We only enter corporate partnerships with companies that we consider will offer a good service to schools. We work in partnership with our sponsors and their PR companies to support and advise their work in schools. They offer ERIC enhanced visibility – as well as the critical funds.

In a tough economic climate in which to attract and retain sponsorship we are very fortunate to have retained the sanitary ware manufacturer Armitage Shanks for the third year running. Additional sponsorship has been obtained with Albany Washroom Services, who are planning to offer a nationwide service to schools that will ensure properly cleaned ‘washrooms’ (industry speak for toilets), including deep cleans. We are working together to produce guidance for schools and local authorities on cleaning, with the involvement of industry cleaning associations.

Thanks to the ERIC Bog Standard Campaign, Armitage Shanks was able to be ahead of the market in designing toilets and products that meet the new Government guidance on school toilets, ‘Toilets in Schools’. They have produced a brochure, ‘An informative guide to school washroom requirements’ as part of their ‘School solutions...what works and why’ series. As we say in the foreword, the brochure *‘should offer inspiration to designers and school alike’*. The designs are for primary and secondary schools and may be useful for schools if they are looking to refurbish or build new toilets – copies are available from 0800 590311.

Biennial Conference of the International Children's Continence Society (Boston, October 2008): A medical perspective

**Dr Gordon Bottomley
Wrightington, Wigan & Leigh Foundation NHS Trust**

I joined the International Children's Continence Society (ICCS) in 2007. Boston was my first direct experience of an ICCS Conference. It was also a welcome return to a city where I spent my elective period as a medical student 29 years previously in the Pediatric Surgery Department of MGH - ironically with a well-known Pediatric Urologist, Hardy Hendren!

This was a joint Conference with the Section of Urology of the American Academy of Pediatrics (AAP), the Pediatric Urology Nurse Specialists (PUNS) and the Society for Fetal Urology (SFU). The AAP Annual Meeting was a fascinating contrast to the Annual Spring Meetings of the Royal College of Paediatrics and Child Health, which I have been attending (mostly at York University) since 1984.

The Conference consisted of individual sessions and joint sessions between the organisations. There were usually parallel sessions. During the long weekend, there were 168 paper presentations, 7 guest lectures and 7 panel discussions. There were also 75 poster presentations – these included one by June Rogers on 'Developing Nurse Competencies'. During the evenings there was time for socialising and various social events, including an amazing reception at the 'Top of The Hub', viewing the Boston skyline at night!

The paper readers were given only 5 minutes. This ensured that only relevant points were made (and concentration was maintained!). The downside was limited time to question the studies (which will have to await peer-review in journals). Many papers reported small, unrandomised studies (and sometimes only 'preliminary results' from a yet uncompleted trial!).

All results discussed in this article should be regarded as preliminary, until reported in a medical journal and subjected to peer review and duplication (where appropriate).

Sessions included the following:

- Perinatal Influences
- Functional Bladder Disturbance
- Elimination Dysfunctional (2 consecutive sessions)
- Influence of co-morbidity (2 sessions)
- Enuresis etiology
- Enuresis management (2 sessions)
- Intractable incontinence (2 sessions)

Nocturnal Enuresis

Many people will remember Professor CK Yeung from Hong Kong, who attended the 2005 ERIC Conference. He is outgoing President of the ICCS and a major influence on research in bladder dysfunction, particularly Nocturnal Enuresis (NE). His team had several relevant papers supporting the notion that there is a dialogue between the bladder and the brainstem. In three studies on rats, Professor Yeung artificially reduced their bladder capacity by partial cystectomy, and compared them with a group of rats in which the bladder was simply mobilised during a laparotomy. Prepulse inhibition of startle reflex (PPISA) - a measure of brainstem function - and cognitive function were reduced; and the sleep pattern changed to more light NREM and less deep NREM & REM sleep. Professor Yeung also reported a parallel study on cognitive function in children with severe Non-

Monosymptomatic Nocturnal Enuresis (using psychometric rather than electrophysiological testing!) which showed a similar reduction in cognitive function. Of particular clinical interest was the finding that the cognitive function of the children improved after successful treatment of the NE.

These studies support results of previous studies on children by CK Yeung & Alexander von Gontard on sleep architecture and brainstem function, lending weight to the view that NE is primarily a sleep disorder originating in the brainstem.

A fifth study by CK Yeung's group compared treatment of severe desmopressin-resistant NE in children by Electroacupuncture (EAP) and by a combination of Desmopressin and Alarm (D+A). An impressive success rate of 80% was achieved in the D+A group, and 60% in the EAP group. However, numbers were small (20 in D+A group). The study also found significant improvements in Maximum Voided Volume (MVV) and brain function (sleep arousal threshold, awakenings & PPISA) in both treatment groups compared to controls.

There were many papers on Nocturnal Enuresis providing further evidence in support of current theories on the pathogenesis and most effective treatments. I have selected a few of personal interest:

A cross-sectional survey of NE in an urban population in Brazil found an overall prevalence of 10%. Non-Monosymptomatic NE (NMNE) accounted for 8.7% and Monosymptomatic NE (MNE) 1.3%. This proportion of NMNE to MNE very much correlates with my own experience in my Community-based Enuresis Clinics in a mostly urban population. However, I was not totally clear on the definition of NE in terms of minimum number of wet nights per week or month. Interestingly, 27% of the non-enuretic children experienced nocturia – even higher than the ALSPAC study results published in 2005.

The above study appeared to use the standardisation criteria established by the ICCS in 2006 (and available for all to view on the ICCS website). This was not true of some of the papers presented by colleagues from the US, who occasionally came in for rather barbed criticism by ICCS researchers during the post-paper discussion periods!

A paper from China compared children with familial Primary Nocturnal Enuresis, sporadic PNE and controls with normal Lower Urinary Tract function. Those with Familial PNE tended to have more severe symptoms and NMNE compared to Sporadic PNE. Both groups had increased nocturnal urine output and arousal thresholds, and reduced MVV, compared to controls.

A paper from the Ghent group looked at parental stress and psychopathology in children with NMNE compared to children without NE. Significant differences were found in stress levels of parents and in 'ADHD-like' and 'Oppositional Defiant' Symptoms in the children with NMNE.

One poster, from Leeds & York, described further work on the theory that the bladder is actually permeable to water. Aquaporins play a major role in transporting water and solute across membranes. They have now been found in human urothelium. It raises the possibility that the bladder can modify the composition and volume of urine stored within it. This may have clinical implications.

In a poster presentation from Washington State and St. Louis, a prospective cohort of 213 African American children with sickle cell anaemia was analysed for NE in a cross-sectional study. One third experienced NE over the course of the study. Even at 18-20 years, 9% reported symptoms. There was no correlation with rates of pain or acute chest syndrome episodes. I am not clear what definition of NE was used. However, this study suggests that children with Sickle Cell Anaemia are particularly vulnerable and need further studies on effective treatment.

The sessions on management of NE were particularly interesting, and signposted future treatments for refractory NE (those children resistant to first-line treatments of alarm, desmopressin or, in NMNE, anticholinergics).

Results from the multi-centre DRIP study, funded by Ferring International, suggested that poor compliance in taking medication may be a reason for failure of treatment. Compliance apparently reduced from 81-91% before the trial to 71% by the end. I am unclear why the children would be so uncompliant if the treatment was effective. However, it is something to bear in mind when assessing failed treatment in clinical practice.

A further paper from the DRIP study suggested that, in an unselected population, desmopressin is very effective in 17%, partially effective in 24%, and ineffective in 60%. Predictors of success included increasing age and nocturnal diuresis.

A third study from Germany, funded by Ferring, suggested that 'tapering off' desmopressin at the end of treatment by gradually increasing administration intervals (while keeping dose constant) produced a lower relapse rate than abruptly stopping the medication. However, the follow-up was only one month, and I am not clear how quickly the tapering was administered.

A clinically relevant paper from Ghent showed that, in 26 children with MNE partially-responsive to desmopressin, an oral fluid load (15ml/kg) 2 hours before bedtime significantly decreased concentrating capacity and increased diuresis. There was also increased fractional excretion of urea and sodium. Thus, reducing fluid intake in the evening might improve effectiveness of desmopressin treatment in partially-responsive MNE.

Imipramine seems to be making a 'come-back' as a second-line treatment in refractory NE. Israel Franco from New York produced results of a retrospective study of 2000+ children treated for NE from 2003-2008 in his hospital. Thirty patients were refractory to 'conventional' treatments. These were treated with a combination of high-dose (0.6mg) desmopressin and low dose imipramine - titrated up from 10-25mg initial dose to 50mg in non-responders over 3-4 weeks. Twenty five children showed a significant response (average time to achieve effect one month). One patient felt weepy. There were no other adverse effects. Three have been weaned off and remain dry. Franco wonders whether the major therapeutic action of imipramine is on the brainstem arousal centre (previous studies have shown that the main metabolite of imipramine increases noradrenaline levels in the Locus Ceruleus). The dose of desmopressin used, of course, was above the maximum licensed dose (ie would be 'off-licence' in the UK).

There was a useful discussion about the potentially lethal cardiotoxic effects of imipramine. Franco stated that, when they did a literature search, they found that all reported cases of cardiotoxicity had occurred in overdose (>2.5mg/kg/day). The major worry is a pre-existing 'long QT interval' (usually familial). There is debate on whether an ECG (or even a prolonged ambulatory ECG) is needed for all children before imipramine treatment, in the absence of a family history or personal history suggestive of long QT interval. Other contraindications/precautions include concomitant use of MAOIs; blood disorders; and hepatic or renal disorders. Also of clinical relevance, Franco stated that children successfully treated on imipramine need a medication 'holiday' of 2 weeks every 3 months to prevent tolerance developing.

There were several papers on second-line 'off-licence' pharmacotherapy of refractory NE. Reboxetine is a 'non-cardiotoxic' alternative to imipramine. A study in Uppsala by Elisabet Lundmark & Tryggve Neveus looked at treatment of 61 children with NE unresponsive to alarm and desmopressin. They were given 4-8mg of reboxetine, and desmopressin was added if there was no response. Thirty two children responded, 18 had no effect, and 21 discontinued treatment or were lost to follow-up. Of the responders, 21 needed combination with desmopressin. Side effects were reported in 24 patients as 'mostly minor'. Five children developed tolerance and needed intermittent treatment. Obviously, a randomised controlled trial is needed to confirm these results.

Another possible treatment for refractory NE is sibutramine, an appetite-suppressant used in obesity. The Ghent group presented a study of 8 children with desmopressin-resistant MNE and documented high nocturnal solute excretion, whose wetting had not responded to diet, frusemide and indomethacin. Four children given sibutramine 1x10mg were dry the next morning, and remained dry for 3 months on that daily dose. Two other children had significant improvement in symptoms and 2 children were unaffected. Two of the 4 full responders relapsed after treatment was stopped. Interestingly, only one patient had a significant decrease in body weight. So the researchers suggest that the therapeutic effect might be direct inhibition of serotonin & noradrenaline uptake in the CNS rather than a nutritional effect.

A further paper from the Ghent group mentioned an ongoing prospective open-label trial of indomethacin combined with desmopressin in 'desmopressin-resistant' MNE. However, only preliminary findings were presented.

ADHD

A batch of papers looked at various aspects of the previously noted association of NE (and other 'elimination disorders') with ADHD.

An epidemiological study from Alexander von Gontard in Homburg, Germany, looked at an unselected group of 1391 children at the time of their 'school-entry' medical check-up (average age 6 years). Questionnaires were administered by structured interview with parents - looking at 'elimination' and 'attention' problems – the latter assessed by the Child Behavior Checklist. 2.9% had attention problems (4:1 boys). 10.6% of all children wetted (9.9% NE, 3.6% daytime incontinence, with some overlap). 0.73% (10 children) had encopresis. Of children with attention problems, 77% (31/40) also wetted and 9 children had combined wetting and encopresis. Of children with wetting or encopresis, 20% (31/154) had attention problems. This group of children, with a combination of wetting and potential ADHD, might benefit from early diagnosis and more specialised assessment, because they can be particularly difficult to treat.

There was also a poster presentation from von Gontard's group comparing Central Nervous System processing of emotions in 3 groups of children - with NE, combined NE/ADHD, and controls (15 in each group). The researchers conclude that there may be a common neurobiological basis for NE and ADHD. More effective treatment might therefore need an 'inter-disciplinary' approach.

A study from New York, which did not use ICCS terminology, looked at 75 children aged 5-16 on medication for ADHD, referred for assessment and management of 'Voiding Dysfunction'. All had daytime wetting and 87% had NE (DSM-IV criteria?). Multimodal treatment was generally required - with combinations of behavioural training, anticholinergics and biofeedback (tried sequentially). Complete resolution of symptoms occurred in 30%. Nine children showed no response. Six children needed all three treatments.

Finally, preliminary results were presented (from Ghent again!) on the effect of methylphenidate (MPH) in children with ADHD on nocturnal urine output. This study is being carried out because a pilot study in 2004 had suggested that MPH induced enuresis. Initial results suggest no effect (but the final results are awaited).

Other Continence Problems

There were useful panel discussions on 'Dysfunctional Elimination Disorders', 'Urinary Incontinence in Developmentally Challenged Children', and 'Management of Intractable Incontinence'. Other sessions had papers covering Toilet Training, Lower Urinary Tract Symptoms, Neurogenic bladder and Encopresis. There was a Guest Lecture and a paper on hypnosis. I do not have the space or time to detail them. June Rogers gave a couple of papers on 'developing nurse competencies' and 'improving communication with children'. The sessions run by the Pediatric Urology Nurse Specialists showed, perhaps, that in this country we are generally far advanced in dealing with

continence issues in the community (though we have a long way to go for services to be ideal). Campaigns like 'Water Is Cool In School' and 'Bog Standard' are only just being considered in the USA.

Summary

Overall, I think the Boston experience was invaluable for a Paediatrician specialising in continence issues. It gave me much to think about. It was very useful to meet the foremost researchers in the field, and to become aware of new trends. It was a great social experience. I'm sure Nurse Specialists would also find it useful (if they can get the funding). The actual costs of an ICCS Conference (or Course) are very reasonable. The expenses are incurred in travelling and accommodation.

The next ICCS Biennial Conference happens to be in the USA again - San Francisco – in late May 2010, in conjunction with the World Conference on Pediatric Urology. Thereafter, in 2012 (if you can wait that long!) it should be in Europe (possible even Britain). In the meantime, there are ICCS Courses all over the world. You can find details on the ICCS website www.i-c-c-s.org . Membership of the ICCS is worth considering. You get access to a member's database as well as regular newsletters, research updates and draft standardisation documents on various topics such as MNE, Daytime Wetting and Dysfunctional Voiding.

Highlights from the 2008 International Children's Continence Society (Boston, October 2008)

Penny Dobson

It was a particular privilege to fly to Boston to attend the International Children's Continence Society (ICCS) meeting as Director of ERIC. Generous sponsorship from Ferring Pharmaceuticals enabled me to be a conference delegate, as well as allowing me to take up the offer of an accepted paper on ERIC's Campaigns to improve water and toilet facilities in UK schools.

On this occasion the ICCS took place within the much larger annual meeting of the American Academy of Pediatrics (AAP). With over 5,000 delegates and 280 exhibitors, the AAP was an impressive meeting.

My presentation was allotted to a sub-group of the AAP, the American Council on School Health. It took place within a programme dominated by concerns about childhood obesity, as well as issues relating to children with narcolepsy and stimulant therapy for children with ADHD. I was encouraged to discover that ERIC's Water is Cool in School and Bog Standard Campaigns are having some influence in the United States with paediatric continence nurses in Iowa currently undertaking research as a prelude to their own school toilet campaign – and other states showing an interest. It was therefore good to be able to encourage colleagues who were finding that constipation and other continence problems were directly affected by poor school water and toilet facilities.

I was fortunate to meet Barbro Lundblad, a nurse researcher from Sweden, who gave a poster presentation to the American Council on her research on how restricting toilet visits during school break times affected the health and psychological wellbeing of children, particularly those who had an existing bladder or bowel disorder. She found, not unexpectedly, that a direct restriction, or relying upon the discretion of the individual teacher, caused children embarrassment and stress and was a special problem for those who had bladder disturbances.

Dr Margaret Boyt from Iowa gave a presentation to a joint session between the ICCS and the Pediatric Urology Nurse Specialists (PUNS) on her concern about the link between access to school toilets and dysfunctional elimination syndrome. She pointed out that the average person spends about 3 years of their life on the toilet. She also voiced concerns that dysfunctional voiding might be a 'learned' response to extreme voiding postponement as a result of children not having access to school toilets when they needed to go. Dr Boyt and her nursing colleagues issued questionnaires to 1,000 elementary (7-14 years) school teachers; out of the 467 returned 31% said that they routinely told children to wait until break time to use the toilet. If the child had an accident in class only 17% of teachers surveyed suspected that there might be a health problem. As only 18% had received information about lower urinary tract problems, it was clear that there was a strong need for educating school teachers in this area of child health – an issue that is familiar to many in this country too!

Research Update

The following is a list of references relating to childhood nocturnal enuresis, daytime wetting and soiling, sourced from Medline and elsewhere during the period July 2008 to December 2008.

Nocturnal Enuresis and Daytime Wetting:

- **Austin PF, Ferguson G, Yan Y, Campigotto MJ, Royer ME, Coplen DE.**
Combination therapy with desmopressin and an anticholinergic medication for nonresponders to desmopressin for monosymptomatic nocturnal enuresis: a randomized, double-blind, placebo-controlled trial.
Pediatrics. 2008 Nov;122(5):1027-32.
- **Azhir A, Gheissari A, Fragzadegan Z, Adebil A.**
New Treatment protocol for primary nocturnal enuresis in children according to ultrasound bladder measurements.
Saudi Med J. 2008 Oct;29(10):1475-9.
- **Baeyens D, Lierman A, Roeyers H, Hoebeke P, Walle JV.**
Adherence in children with nocturnal enuresis.
J Pediatr Urol. 2008 Nov 6. (Epub ahead of print)
- **Chung JM, Lee SD, Kand DI, Kwon DD, Kim KS, Kim SY, Kim HG, Moon DG, Park KH, Park YH, Pai KS, Suh HJ, Lee JW, Cho WY, Ha TS, Han SW.**
Prevalence and Associated Factors of Overactive Bladder in Korean Children 5-13 years old: A Nationwide Multicenter Study.
Urology. 2008 Sep 29. (Epub ahead of print)
- **Dunn DW, Austin JK, Perkins SM.**
Prevalence of psychopathology in childhood epilepsy: categorical and dimensional measures.
Dev Med Child Neurol. 2008 Nov 19. (Epub ahead of print)
- **Field JJ, Austin PF, An P, Yan Y, DeBaun MR.**
Enuresis is a common and persistent problem among children and young adults with sickle cell anemia.
Urology. 2008 Jul;72(1):81-4
- **Ghanizadeh A.**
ADHD, bruxism and psychiatric disorders: does bruxism increase the chance of a comorbid psychiatric disorder in children with ADHD and their parents?
Sleep Breath. 2008 Nov;12(4):375-80
- **Ghanizadeh A.**
Methylphenidate-associated enuresis in attention deficit hyperactivity disorder.
J Pediatr Urol. 2008 Aug;4(4):306-7
- **Guchtanaere AD, Raes A, Walle CV, Hoebeke P, Van Laecke E, Donckerwolcke R, Vande Walle J.**
Evidence for Partial Anti-Enuretic Response Related to Poor Pharmacodynamic Effects of Desmopressin Nasal Spray.
J Urol. 2008 Nov 13. (Epub ahead of print)

- **Hergüner S, Mukaddes NM.**
Risperidone-Induced Enuresis in Two Children with Autistic Disorder.
J Child Adolesc Psychopharmacol. 2008 Nov 13 (Epub ahead of print)
- **Hyde TM, Deep-Soboslay A, Iglesias B, Callicott JH, Gold JM, Meyer-Lindenberg A, Honea RA, Bigelow LB, Egan MF, Emsellem EM, Weinberger DR.**
Enuresis as a premorbid developmental marker of schizophrenia.
Brain. 2008 Sep;131(Pt 9):2489-98
- **Inan M, Tokuc B, Aydiner CY, Aksu B, Oner N, Basaran UN.**
Personal characteristics of enuretic children: an epidemiological study from South-East Europe.
Urol Int. 2008;81(1):47-53
- **Kamperis K, Rittig S, Radvanska E, Jørgensen KA, Djurhuus JC.**
The effect of desmopressin on renal water and solute handling in desmopressin resistant monosymptomatic nocturnal enuresis.
J Urol. 2008 Aug;180(2):707-13
- **Kotagal S.**
Parasomnias of childhood.
Curr Opin Pediatr. 2008 Dec;20(6): 659-65.
- **Kwak KW, Park KH.**
Clinical Inconsistency of lower urinary tract symptoms between questionnaire and bladder diary in children with nocturnal enuresis.
J Urol. 2008;180(3):1085-9
- **Schaumburg HL, Kapilin U, Blåsvaer C, Eiberg H, Von Gontard A, Djurhuus JC, Rittig S.**
Hereditary phenotypes in nocturnal enuresis
BJU Int. 2008 Sep;102(7):816-21
- **Toktamis A, Demirel Y, Ozkan KU, Garipardıç M, Gözüküçük A, Nur N.**
Prevalence and associated factors of day wetting and combined day and night wetting.
Urol Int. 2008;81(1):54-9
- **Wang QW, Wen JG, Zhu QH, Zhang GX, Yang K, Wang Y, Zhu ZQ, Li ZZ, Zhang RL, Yang YF, Wei JX.**
The effect of familial aggregation on the children with primary nocturnal enuresis.
Neurourol Urodyn. 2008 Nov 14. (Epub ahead of print)
- **Zambito A, Dall'oca C, Polo A, Bianchini D, Aldegheri R.**
Spina bifida occulta. Foot deformities, enuresis and vertebral cleft: clinical picture and neurophysiological assessment.
Eur J Phys Rehabil Med. 2008 Dec;44(4): 437-40.

Constipation and Soiling:

- **Feinberg L, Mahajan L, Steffen R.**
The constipated child: is there a correlation between symptoms and manometric findings?
J Pediatr Gastroenterol Nutr. 2008 Nov;47(5):607-11
- **Griffin SJ, Parkinson EJ, Malone PS.**
Bowel management for paediatric patients with faecal incontinence.
J Pediatr Urol. 2008 Oct;4(5):387-92

- **Kokke FT, Scholtens PA, Alles MS, Decates TS, Fiselier TJ, Tolboom JJ, Kimpfen JL, Benninga MA.**

A dietary fiber mixture versus lactulose in the treatment of childhood constipation: a double-blind randomized controlled trial.

J Pediatr Gastroenterol Nutr. 2008 Nov;47(5):592-7

- **Liem NT, Hau BD.**

One-stage Operation for Hirschsprung's Disease: Experience with 192 Cases.

Asian J Surg. 2008 Oct;31(4):215-9

- **Magee JC, Ritterband LM, Thorndike FP, Cox DJ, Borowitz SM.**

Exploring the Relationship between Parental Worry about their Children's Health and Usage of an Internet Intervention for Pediatric Encopresis.

J Pediatr Psychol. 2008 Sep 4. (Epub ahead of print)

- **Michaud L, Lamblin MD, Mairesse S, Turck D, Gottrand F.**

Outcome of Functional Constipation in Childhood: A 10-Year Follow-Up Study.

Clin Pediatr (Phila). 2008 Oct 2 (Epub ahead of print)

- **Nanigian DK, Nguyen T, Tanaka ST, Cambio A, DiGrande A, Kurzrock EA.**

Development and validation of the fecal incontinence and constipation quality of life measure in children with spina bifida.

J Urol. 2008 Oct;(4 Suppl):1770-3.

- **Nijman RJ.**

Diagnosis and management of urinary incontinence and functional fecal incontinence (encopresis) in children.

Gastroenterol Clin North Am. 2008 Sep;37(3):731-48.

- **Nurko S, Youssef NN, Sabri M, Langseder A, McGowan J, Cleveland M, Di Lorenzo C.**

PEG3350 in the treatment of childhood constipation: a multicenter, double blinded, placebo controlled trial.

J Pediatr. 2008 Aug;153(2):254-61

- **Van Everdingen-Faasen EQ, Gerritsen BJ, Mulder PG, Fliers EA.**

Psychosocial co-morbidity affects treatment outcome in children with fecal incontinence.

Eur J Pediatr. 2008 Sep;167(9):985-9.

- **Wong AL, Kravarusic D, Wong SL.**

Impact of cecostomy and antegrade colonic enemas on management of fecal incontinence and constipation: ten years of experience in pediatric population.

J Pediatr Surg. 2008 Aug;43(8):1445-51

General Articles:

- **Bhat AL, Bhat M, Sharma R, Saxena G.**

Single stage perineal urethroplasty for continence in female epispadias: a preliminary report.

Urology. 2008 Aug;72(2):30 0-3

- **Ghanizadeh A.**

ADHD, bruxism and psychiatric disorders: does bruxism increase the chance of a comorbid psychiatric disorder in children with ADHD and their parents?

Sleep Breath. 2008 Nov;12(4):375-80

- **Kaye JD, Palmer LS.**

Animated biofeedback yields more rapid results than nonanimated biofeedback in the treatment of dysfunctional voiding in girls.

J Urol. 2008 Jul;180(1):300-5

- **Libonate J, Evans S, Tsao JC.**

Efficacy of acupuncture for health conditions in children: a review.

Scientific Word Journal. 2008 Jul 13;8:670-82

- **Roth TJ, Vandersteen DR, Hollatz P, Inman BA, Reinberg YE.**

Sacral neuromodulation for the dysfunctional elimination syndrome: a single center experience with 20 children.

J Urol. 2008 Jul;180(1):306-11

ERIC has reproduced the following abstracts for your interest:

Austin PF, Ferguson G, Yan Y, Campigotto MJ, Royer ME, Coplen DE.

Combination therapy with desmopressin and an anticholinergic medication for nonresponders to desmopressin for monosymptomatic nocturnal enuresis: a randomized, double-blind, placebo-controlled trial.

Pediatrics. 2008 Nov;122(5): 1027-32

Objective: Desmopressin is an approved medical therapy for the treatment of monosymptomatic primary nocturnal enuresis. In cases of limited response to desmopressin, we have added anticholinergic therapy to desmopressin (combination therapy). To evaluate this treatment strategy, we examined the efficacy of combination therapy for primary nocturnal enuresis in desmopressin nonresponders.

Method: Only patients with primary nocturnal enuresis refractory to the maximal dosage of desmopressin were enrolled. Children with lower urinary tract symptoms or bowel dysfunction were excluded, on the basis of a 3-day, 24 hour, frequency-volume chart and elimination record. Children continued to take desmopressin and were assigned randomly, in a double-blind manner, to receive either extended-release anticholinergic medication or placebo. Patients were reassessed after 1 month of therapy, with a 1-week nocturnal record.

Results: Forty-one desmopressin-nonresponders were enrolled, and 7 patients were excluded because of non-compliance. The treatment groups were equally matched with respect to age, gender, functional bladder capacity, and number of wet nights per week. After 1 month of treatment, there was a significant reduction in the mean number of wet nights in the combination therapy group, compared with the placebo group. With a generalized estimating equation approach, there was a significant 66% decrease in the risk of a wet episode, compare with the placebo group.

Conclusions: This study represents the first prospective, placebo-controlled trial examining the effect of desmopressin in combination with long-acting, anticholinergic, bladder-relaxing therapy for monosymptomatic primary nocturnal enuresis.

Azhir A, Gheissari A, Fragzadegan Z, Adebil A.

New treatment protocol for primary nocturnal enuresis in children according to ultrasound bladder measurements.

Saudi Med J. 2008 Oct;29(10):14 75-9

Objective: To evaluate the response rate of various modalities of therapy in primary nocturnal enuretic children according to the ultrasound bladder volume and wall thickness index (BVWI) measurements.

Methods: From February 2006 to November 2007, a total of 31 children, aged 6-12 years old were enrolled in a clinical trial. Based on BVWI they were divided into 3 groups as follows: Group 1 (BVWI <70%) was treated with oral desmopressin and oxybutynin; Group 2 (BVWI 70% to <130%) was treated with oral desmopressin. Group 3 (BVWI >130%) was treated with oral desmopressin accompanied by double-voiding technique and scheduled voiding. All of them were treated for 3 months.

Results: Significant reductions in mean bed-wetting frequency before and after first treatment cycle were observed in all groups ($p < 0.05$). The complete response rate was 70% in Group 1, 25% in Group 2, and 20% in Group 3. Overall, the complete and partial response rate was 9/10 (90%) children in Group 1, 13/16 (81%) in Group 2, and 3/5 (60%) in Group 3. Bedwetting frequency significantly decreased at the first and second treatment cycles in Group 2 ($p < 0.05$) for each pair wise comparison.

Conclusion: The proposed treatment representation according to ultrasound BVWI measurements achieves favourable response rates in children with PNE. We suggest that this treatment should be used to develop the management of enuresis in children.

Baeyens D, Lierman A, Roeyers H, Hoebeke P, Walle JV.

Adherence in children with nocturnal enuresis.

J Pediatr Urol. 2008 Nov 6.

Objective: The treatment of enuresis requires adherence to several guidelines often over a long period of time. The aims of this study were 1) to investigate adherence to the medical treatment for enuresis and its influence on therapeutic success, and 2) to gain insight into the socio-demographic, medical, familial and psychological predictors of adherence.

Materials and Methods: For 41 children (6-12 years) with nocturnal enuresis, adherence to four common guidelines (drinking and voiding schedule, toilet posture and medication intake) was measured at 1, 3 and 5 months after treatment.

Results and Conclusions: Mean adherence to the medical regime is about 70% according to both child and parent reports at the 24-h recall interview. Greater adherence, particularly to the drinking schedule, was associated with greater therapeutic success after 6 months. The best predictor of good adherence was a positive perception of one's physical appearance and to a lesser extent low levels of stress related to the treatment of the disorder.

Feinberg L, Mahajan L, Steffen R.

The constipated child: is there a correlation between symptoms and manometric findings?

J Pediatr Gastroenterol Nutr. 2008 Nov;47(5):607-11

Purpose: The aim of our study was to evaluate patients referred for care of chronic constipation. We compared results of the anorectal manometry studies with a patient/guardian questionnaire about the patients' constipation.

Patients and Methods: From patients seen for constipation in the department of pediatric gastroenterology, 123 were prospectively enrolled and they completed symptom questionnaires. These patients already were treated with stool softeners, either by the referring primary care physician or by the referring gastroenterologist. Anorectal manometry was performed per standard protocol.

Results: Of the 123 patients enrolled in the study, 57.7% were male. Patient age ranged from 0.2 to 17.8 years, and the mean age was 7.5 years. The average duration of constipation was 4.84 years. The average number of stools per week was 3.6. Average time spent in the defecation process was 13.3 minutes. The incidence of hematochezia was 30%. Delayed passage of meconium was reported in 45 of 99 patients (45.5%). Significant correlation was found between frequency of soiling and threshold for rectoanal inhibitory reflex ($P = 0.029$). The volume of first urge also was positively correlated with frequency of soiling ($P = 0.034$). There was significant correlation of withholding behaviour and the maximum volume tolerated ($P = 0.020$). The presence of blood in stool was inversely correlated with the maximum volume tolerated ($P = 0.004$). No correlation was found between severity of complaints and the presence of paradoxical puborectalis contraction. Of the patients, 90.5% had paradoxical puborectalis contraction.

Conclusions: Significant correlation was found between frequency of soiling and rectoanal inhibitory reflex, as well as soiling and volume of first urge. There was correlation between withholding behaviors and maximum volume tolerated. The presence of blood inversely correlated with maximum volume tolerated. Anorectal manometry continues to provide additional new information and to assist in managing patients with this common chronic pediatric affliction.

Griffin SJ, Parkinson EJ, Malone PS.

Bowel management for paediatric patients with faecal incontinence.

J Pediatr Urol. 2008 Oct;4(5):387-92.

Objective: This review assesses the incidence and aetiology of faecal incontinence in childhood. We then systematically address the presentation, clinical assessment, investigation and management of these children. Under management, both medical and surgical approaches and their complications are discussed.

Guchtenaere AD, Raes A, Walle CV, Hoebeke P, Van Laecke E, Donckerwolcke R, Vande Walle J.

Evidence for Partial Anti-Enuretic Response Related to Poor Pharmacodynamic Effects of Desmopressin Nasal Spray.

J Urol. 2008 Nov 13. (Epub ahead of print)

Purpose: Desmopressin is an evidence based medicine level I, category A therapy for monosymptomatic nocturnal enuresis. However, in up to 40% of patients only partial desmopressin response is obtained. While the poor pharmacokinetic characteristics of the different available formulations may have a role in apparent therapy resistance, there are limited data available to support this theory. We sought to identify pharmacodynamic factors involved in partial desmopressin response or desmopressin resistance in children

with monosymptomatic nocturnal enuresis, with special emphasis on concentrating performance, and time to reach and duration of maximal urine concentration.

Materials and Methods: We evaluated 64 children with monosymptomatic nocturnal enuresis and proved nocturnal polyuria lacking full response to desmopressin treatment. The study involved 2 separate home based test days (A and B), each consisting of 9 timed urine collections starting in the evening 1 hour before desmopressin administration and continuing for 16 hours following desmopressin administration. Test A was done during fluid restriction, and test B was done during an oral fluid load.

Results: Under fluid restriction 16 patients failed to achieve urine concentration greater than 850 mosmol/l at the midnight collection following desmopressin administration. After an oral fluid load given at the start of the test the majority of patients failed to reach maximal concentration of urine as voided during hydropenia, and 45 patients failed to regain appropriate dilution of urine even when an oral water load of 15ml/kg (urine osmolality less than 750 mosmol/l) was given in the morning at the end of the test. This finding is suggestive of a prolonged duration of action of the drug.

Conclusions: Pharmacodynamic tests revealed a suboptimal effect of desmopressin on urine concentration in a significant percentage of patients, which worsens when fluid is not restricted before desmopressin administration. Also the time to reach maximal antidiuretic effect and the duration of pharmacodynamic action show a wide range, requiring individualization of mode and time of administration. Our data demonstrate that a simple pharmacodynamic test as described may give important information on time of dosing, duration of action and influence of oral fluid intake, allowing individualization of therapy. Data also reveal that desmopressin should be administered at least 1 hour before bedtime, and that in case of therapy resistance a longer interval, up to 2 hours, might further reduce diuresis rate in the early night. Because of the documented prolonged action of desmopressin in some patients, increasing the dose without performing pharmacodynamic testing is no longer acceptable.

Hergüner S, Mukaddes NM.

Risperidone-Induced Enuresis in Two Children with Autistic Disorder.

J Child Adolesc Psychopharmacol. 2008 Nov 13.

Abstract Introduction: Risperidone appears to be effective in treating behavioural problems in children with autistic disorder. Although increased appetite, weight gain, and sedation are among the most common side effects, risperidone-induced enuresis is rarely reported.

Method: We will present two cases with risperidone-induced enuresis, and discuss our findings in the context of current literature.

Results: Two children aged 11 and 10 years, diagnosed with autism and mental retardation, have developed new-onset diurnal and nocturnal enuresis respectively on their first and second weeks of risperidone monotherapy (1.5 and 1 mg/day). They did not experience sedation, and their medical history and workup were unremarkable. As enuresis did not resolve spontaneously, we decided to substitute risperidone with olanzapine. Enuresis ceased rapidly after discontinuation of risperidone with no emergence when patients were treated with olanzapine 5 mg/day for a period of 6 months and 1 year, respectively.

Discussion: Although the pathophysiology of antipsychotic-induced enuresis remains unclear, a number of mechanisms including alpha (1)-adrenergic blockade, dopamine blockade, and antimuscarinic effects has been proposed. Olanzapine has lower alpha (1)-adrenergic and dopaminergic blockade properties, thus changing risperidone to olanzapine modality in risperidone-induced enuresis when antipsychotic treatment is crucial. Clinicians should be more vigilant about screening for this side effect, especially in younger population with developmental disabilities.

Kamperis K, Rittig S, Radvanska E, Jorgensen KA, Djurhuus JC.

The effect of desmopressin on renal water and solute handling in desmopressin resistant monosymptomatic nocturnal enuresis.

J Urol. 2008 Aug;180(2):707-13

Purpose: We sought to evaluate the effect of desmopressin on renal water and solute handling in children with monosymptomatic nocturnal enuresis and desmopressin resistant nocturnal polyuria compared to healthy controls.

Materials and Methods: A total of 12 patients with enuresis and nocturnal polyuria, normal bladder reservoir function and no response to desmopressin, and 10 age matched controls were enrolled in the study. Children were admitted to the hospital for a 48-hour protocol comprising urine collections and blood sampling. Sodium and water intake was standardized. During the second night children received 40 mug intranasal desmopressin. Parameters characterizing the renal water and solute handling were measured and compared between baseline nights and nights with desmopressin.

Results: Desmopressin markedly reduced nocturnal urine output in patients with enuresis, minimizing sodium, urea and overall solute excretion, despite the fact that these children were unresponsive to desmopressin at home. This effect on renal sodium handling was not mediated by atrial natriuretic peptide, angiotensin II, aldosterone or rennin. Desmopressin did not influence urinary prostaglandin E (2) excretion. The antinatriuretic effect was seen only in patients with enuresis, and it was directly correlated with the reduction in urine output.

Conclusions: Children with nocturnal enuresis and nocturnal polyuria who do not exhibit adequate response to desmopressin at home seem to respond well to the agent at the clinic. The effect of desmopressin in children with enuresis seems largely dependent on reductions in the amount of sodium excreted. Sodium regulating hormones remained unaffected by desmopressin, indicating a possible direct effect on renal sodium handling.

Kokke FT, Scholtens PA, Alles MS, Decates TS, Fiselier TJ, Tolboom JJ, Kimpfen JL, Benninga MA.

A dietary fiber mixture versus lactulose in the treatment of childhood constipation: a double-blind randomized controlled trial.

J Pediatr Gastroenterol Nutr. 2008 Nov;47(5):592-7

Background: Constipation is a common problem in children. As first-line treatment, increased dietary fiber is often advocated. To our knowledge, however, no large studies evaluating the effect of dietary fibers in childhood constipation have been published.

Patients and Methods: A randomized, double-blind, prospective controlled study was performed. Patients received either a fiber mixture or lactulose in a yogurt drink. After a baseline period of 1 week, patients were treated for 8 weeks followed by 4 weeks of

weaning. Polyethylene glycol 3350 was added if no clinical improvement was observed after 3 weeks. Using a standardized bowel diary, parents recorded defecation frequency during the treatment period. In addition, incontinence frequency, stool consistency, presence of abdominal pain and flatulence, necessity for step up medication, and dry weight of feces were recorded, as were adverse effects.

Results: A total of 147 children were eligible; 12 children wished not to participate. Of the remaining children, 65 were randomized to treatment with fiber mixture and 70 to treatment with lactulose. In all, 97 children completed the study. No difference was found between the groups after the treatment period concerning defecation frequency ($P = 0.481$) and fecal incontinence frequency ($P = 0.084$). However, consistency of stools was softer in the lactulose group ($P = 0.01$). Abdominal pain and flatulence scores were comparable ($P = 0.739$, respectively). The necessity of step-up medication during the treatment period was comparable ($P = 0.996$), as were taste scores ($P = 0.657$). No serious adverse effects were registered.

Conclusions: A fluid fiber mixture and lactulose give comparable results in the treatment of childhood constipation.

Libonate J, Evans S, Tsao JC.

Efficacy of acupuncture for health conditions in children: a review.

Scientific World Journal. 2008 Jul 13;8:670-82

Acupuncture has been used to treat a variety of childhood problems; however, the efficacy and safety of pediatric acupuncture remains unclear. This article reviews the existing empirical literature relating to the use of acupuncture for medical conditions in children. A systematic search of the literature revealed that acupuncture has been used to treat five main conditions in children, including pain, nocturnal enuresis, postoperative nausea/vomiting, laryngospasm/stridor, and neurological disorders. Despite a number of methodological issues, including limited sample sizes, lack of randomization, and inappropriate control groups, it is concluded that acupuncture represents a promising intervention for a variety of pediatric health conditions. To further address the safety, effectiveness, and acceptability of acupuncture in children, large scale randomized controlled trials are needed.

Liem NT, Hau BD.

One stage Operation for Hirschsprung's Disease: Experience with 192 Cases.

Asian J Surg. 2008 Oct;31(4):216-9

Objective: To report early and late outcomes after a one stage operation for Hirschsprung's Disease (HD).

Methods: Between December 2001 and December 2004. 192 patients (165 boys and 27 girls) underwent a one stage operation for HD. Operative techniques included modified Pfannenstiel incision (48 cases), modified posterior sagittal approach (64 cases), and primary laparoscopic assisted endorectal colonic pull-through procedure (80 cases). Ages ranged from 15 days to 36 months. The diagnosis was confirmed by operative frozen biopsies.

Results: An aganglionic segment was located in the rectum in 105 patients, in the sigmoid colon in 83 and in the left colon in four. There were no operative deaths. In one patient, a small intestinal perforation occurred 3 days after operation and required

ileostomy. Anastomotic leakage occurred in four patients treated by modified posterior sagittal approach. The median hospital stay was 6 days, excluding five patients who required enterostomy. One hundred and forty five patients were followed up for 6-40 months after discharge from the hospital. All patients had spontaneous defecation. The stool frequency from one to four times daily in 113 patients, five to six times in 13, and over six times in four patients. There were seven patients with faecal incontinence and eight with constipation.

Conclusion: One stage operation is a safe procedure for HD.

Michaud L, Lamblin MD, Mairesse S, Turck D, Gottrand F.

Outcome of Functional Constipation in Childhood: A 10 Year Follow Up Study.

Clin Pediatr (Phila). 2008 Oct 2.

Objectives: To assess the outcome of patients presenting with functional constipation in childhood during a 10 year period to determine any risk factors for developing persistent constipation throughout adolescence and adulthood.

Patients and Methods: 72 children (mean age 4 years; 40 boys) referred for constipation were included in a longitudinal set of observations. Initial workup included segmental colonic transit time and anorectal manometry; 45 of the 72 patients could be reevaluated 10 to 12 years later.

Results: 21 of 45 patients (46%; 95% confidence interval 29% to 67%) remained constipated at follow up. Encopresis and recurrent abdominal pain were present in 25% and 56% of patients, respectively. Patients with anorectal dyssynergia remained more frequently constipated at follow up than the others; 61% versus 29% ($P = <.05$).

Conclusion: Almost 50% of patients presenting with constipation during childhood remained constipated on long term follow up. Anorectal dyssynergia is associated with a worse prognosis.

Van Everdingen-Faasen EQ, Gerritsen BJ, Mulder PG, Fliers EA, Groeneweg M.

Psychosocial co morbidity affects treatment outcome in children with fecal incontinence.

Eur J Pediatr. 2008 Sep;167(9):9 85-9.

Fecal incontinence is a common disorder in children. Many children with fecal incontinence have psychosocial co morbidity. In this study, the effect of psychosocial co morbidity on the treatment outcome of children with fecal incontinence was evaluated.

One hundred and fifty children with fecal incontinence were treated in a multidisciplinary program. All children had been treated unsuccessfully for at least one year before entering the program. The treatment consisted of laxative treatment, psychosocial interventions, and biofeedback training. Psychosocial co morbidity was classified according to the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV). One hundred and forty one children were completely analyzed (102 boys, mean age 9.6 (range 6.5-16.5) years). Of these, 31 (22%) children had fecal incontinence without constipation and 110 (78%) children had fecal incontinence associated with constipation. In 95% of children, at least one psychosocial co morbidity was present.

Treatment was successful at 12 months in 69% of patients. Treatment was less successful in children with attention deficit hyperactivity disorder (ADHD), in children with parent child relational problems, and in mentally retarded children. The results indicate

that the early assessment and treatment of psychosocial co morbidity might improve treatment response in children with fecal incontinence. Children with fecal incontinence are treated less successfully in the first year if they have ADHD, parent child relational problems, or mental retardation. Psychosocial evaluation and the early assessment and treatment of psychosocial co morbidity is indicated in order to improve response rate. Family counselling aimed at improving parent child relations should be an integral part of a multidisciplinary treatment program for fecal incontinence.

Wang QW, Wen JG, Zhu QH, Zhang GX, Yang K, Wang Y, Zhu ZQ, Li ZZ, Zhang RL, Yang YF, Wei JX.

The effect of familial aggregation on the children with primary nocturnal enuresis.

Neurrol Urodyn. 2008 Nov 14.

Objective: To evaluate the effect of familial aggregation on the children with PNE by evaluating nocturnal urine output, bladder, and arouse function.

Patients and Methods: According to whether relatives of family of probands over three generations were affected by PNE, forty five children with familial aggregation PNE (FPNE), seventy children with sporadic PNE (SPNE) and ten children with normal lower urinary tract function but waiting for operation (control group) were included. Questionnaire of arousal from sleep (AS scores), bladder diary and daytime urodynamic studies were performed in all patients.

Results: The incidences of severe PNE and nonmonosymptomatic PNE in FPNE group were significantly higher than those in SPNE group. The nocturnal urine output and AS scores in both PNE groups was significantly higher, maximal voided volume significantly smaller than those in control group. Moreover, the incidences of small bladder in FPNE group was 44%, significantly higher than that in SPNE group (21%), but no significant difference was found in nocturnal polyuria and arousal AS scores between two PNE groups. There were 53% patents with daytime detrusor overactivity and 60% patents with urodynamic functional bladder outflow obstruction in FPNE group, significantly higher than those in SPNE group (19% and 37%). Maximum cystomatic capacity significantly decreased from control group to FPNE group.

Conclusion: Familial aggregation has significant effects on the children with PNE, and FPNE are more likely to be severe symptoms and bladder dysfunction. It would be beneficial to have an urodynamic study for their diagnosis and treatment.