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Children's Continence Current Awareness Bulletin

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Title: Psychological differences between toilet trained and non-toilet trained 4-year-old children

Citation: Journal for Specialists in Pediatric Nursing; Apr 2021; vol. 26 (no. 2)

Author(s): Axelrod, Michael I; Larsen, Ray J; Jorgensen, Keith; Stratman, Bobbie

Objective: Late to complete toilet training has been associated with many psychological factors including behavior and mood problems. Unfortunately, the majority of the research is specific to children with elimination disorders or children identified as incontinent after the age of 7 years. The current study addressed gaps in the literature by comparing the psychological functioning of children not toilet trained by their 4-year-old well child care visit with their toilet trained peers.

Design and Methods: Parent reports of internalizing and externalizing behavior using the Child Behavior Checklist (CBCL) were compared across groups, non-toilet trained and toilet trained, for 150 children recruited during their 4-year-old well child health care visit. Independent samples t tests of group means and $\chi 2$ analyses were performed on all CBCL scales.

Results: Results found no clinically or statistically significant differences between groups on parents' reports of internalizing and externalizing behavior. The current study provides no evidence that delays in successfully completing toilet training by 4 years of age were related to psychological problems for this sample of children.

Practice Implications: Nursing professionals in primary care settings are positioned to provide anticipatory guidance to parents of children not yet toilet trained.

Findings: From the current study offer evidence that delays in toilet training might not be related to psychopathology, and these children are not likely to require intervention outside the pediatric setting and could be effectively managed by primary care health providers employing evidence-based toilet training protocols.

Title: Dissatisfaction with school toilets is associated with bladder and bowel dysfunction.

Citation: European journal of pediatrics; May 2021

Author(s): Jørgensen, Cecilie S; Breinbjerg, Anders S; Rittig, Søren; Kamperis, Konstantinos

Abstract: Poor quality of school toilets is reportedly an issue in many countries and has been correlated with toilet refusal in children. The aim of this study was to evaluate the association between perceived school toilet quality, behaviour regarding toilet visits, and symptoms of bladder and bowel dysfunction (BBD). Pupils in Danish schools were invited to complete online questionnaires regarding toilet behaviour, perception of school toilet standards/quality, and symptoms of BBD. Teachers at the same schools were asked about the quality of the toilets. We recruited 19,577 children from 252 different schools. More than half of the children (50% boys and 60% girls) were dissatisfied with the toilet facilities. One-fourth of the children (28% of girls, 23% of boys) reported avoiding the use of school toilets. We found a strong correlation between being dissatisfied with school toilets, toilet avoidance, and symptoms of BBD.

Conclusion: The majority of Danish children are unhappy with their school toilet facilities. Symptoms of BBD are associated with subjective toilet dissatisfaction and toilet visit postponement. Because children spend a significant part of their day at school, access to satisfactory toilet facilities is of utmost importance for their well-being.

Title: Urodynamic characterization of giggle incontinence in children.

Citation: Neurourology and urodynamics; Jun 2021

Author(s): Mohan Kunnath, Sharon; Clothier, Joanna; Solomon, Eskinder; Wright, Anne J; Taghizadeh, Arash

Objectives: Giggle incontinence is a rare condition resulting in excessive urinary incontinence with laughter, where bladder function is otherwise "normal." Urodynamic descriptions of the condition to date are limited. We believe that giggle incontinence has characteristic urodynamic findings. We tested this hypothesis.

Methods: We retrospectively reviewed the urodynamic investigations of patients with giggle incontinence managed in a tertiary regional bladder unit between February 2014 and November 2019.

Results: We identified the studies of seven patients, median age 13.5 years (10.4-15.7) of whom 6 were female. All had videourodynamics. Two went on to have further invasive investigation; one had urethral pressure profile and one had ambulatory urodynamics. Detrusor overactivity (DO) was observed in six. DO was asensate in all. In five DO was triggered by laughter and was associated with laughter induced incontinence in four. Six had DO that was not provoked by laugher. In one amplitude of DO was proportional to vigour of laughter. In three patients there was identification of sudden pelvic floor relaxation during laughter resulting in incontinence. Stress urinary incontinence was not observed in any.

Conclusions: Giggle incontinence is a complex phenomenon. Urodynamic diagnosis is challenging and is dependent on eliciting laughter. We present the first urodynamic demonstration that giggle incontinence is associated with laughter-induced, asensate DO and concurrent, momentary pelvic floor relaxation. We hope this will provide a more consistent basis for defining this condition in the future.

Title: Frequency and Factors Associated with Urinary Incontinence in Pregnant Adolescents: A Cross-Sectional Study.

Citation: Journal of pediatric and adolescent gynecology; Jun 2021; vol. 34 (no. 3); p. 366-376

Author(s): de Vasconcelos, Vanessa Sampaio; da Costa, Aurélio Antônio Ribeiro

Objective: To determine the overall frequency of urinary incontinence in pregnant adolescents, focusing particularly on the presence of symptoms of stress urinary incontinence (SUI) and coital incontinence (CI), and to describe the biological, sociodemographic, clinical, urinary, reproductive, sexual, and lifestyle factors associated with incontinence.

Design: A cross-sectional, descriptive study.

Setting: The outpatient clinic for high-risk pregnancies at the Instituto de Medicina Integral Prof. Fernando Figueira (IMIP) in Recife, Pernambuco, in the Northeast of Brazil.

Participants: A convenience sample of 103 pregnant adolescents who attended for prenatal consultations during the study period.

Interventions: Data were collected on the participants' characteristics and information based on the Incontinence Severity Index (ISI) questionnaire.

Main outcome measures: Frequency of urinary incontinence and possible correlations between the women's characteristics and SUI and CI symptoms.

Results: Mean age (±standard deviation) was 16.76 ± 1.8 years. Urinary incontinence was present in 60.1% of the patients. Of these, 37.8% had SUI and 33.9% CI. In addition, 30.8% of the patients with CI also had SUI. There were statistically significant associations between CI and the occurrence of SUI prior to pregnancy (100%; PR: 1.77; 95% CI: 1.48-2.13; P = .011), between SUI and chronic coughing (60%; PR = 1.95; 95% CI: 1.23-3.09; P = .009), and between CI and height (41.9%; PR = 1.00; 95% CI: 0.27-1.00; P = .036).

Conclusion: Urinary incontinence is a dysfunction that may affect pregnant adolescents, with symptoms possibly beginning as early as the first trimester of pregnancy.

Title: Sex- and age differences in lower urinary tract dysfunction in healthy children.

Citation: Acta paediatrica (Oslo, Norway : 1992); May 2021

Author(s): Salö, Martin; Nejstgaard, Malin Carvahlo; Hambraeus, Mette; Graneli, Christina; Börjesson, Anna; Hagelsteen, Kristine; Stenström, Pernilla

Objective: Information about healthy children's urinary tract symptoms is scarce but would be helpful in children with congenital urinary tract conditions. The aim of this study was to develop and evaluate a Lower Urinary Tract Dysfunction (LUTD) questionnaire.

Methods: A 15-item questionnaire based on definitions by the International Children's Continence Society (ICCS) about urinary tract function, was given to children 4-15 years old with no gastrointestinal or urinary tract conditions. The study was approved ethically.

Results: The response rate was 82% (311/377), 50% (n=155) were girls. Children were of the age groups 3.5-7 years (n=136), 8-12 years (n=127), and 13-15 years (n=48). More girls than boys reported urinary tract infections (20% vs 3%, p<0.001), while prevalences of incontinence and enuresis were equivalent in both sexes. In the youngest age group, enuresis was the most frequently reported symptom (11%), then daytime incontinence (10%). The older children more frequently reported previous urinary tract infections (12% and 17% in respective groups) and daytime incontinence (9% and 6%, respectively).

Conclusion: A LUTD questionnaire is developed and evaluated within this study. Daytime urinary incontinence is the overall most common lower urinary tract symptom and girls report infections more frequently than boys.

Title: Prospective quality of life outcomes in pediatric fecal incontinence following bowel management.

Citation: Journal of pediatric surgery; Jun 2021 ; p. 60263

Author(s): Lim, Irene Isabel P; Cushing, Christopher C; Jenkins, Todd; Troutt, Misty; Zeller, Margaret H; Hossain, Monir; Rymeski, Beth; Helmrath, Michael; Frischer, Jason S

Background: Severe fecal incontinence (FI) is common in patients both with and without anorectal malformations. Whether a formal bowel management program (BMP) has significant effects on FI, psychosocial development of the child, and caregiver stress is poorly understood. We hypothesize

that BMP participation results in long-term clinical and quality of life (QOL) improvements for patients and caregivers.

Methods: Using a prospective cohort study over three years, 342 children (age 3-12 years) and caregivers were followed for one year after attending a week-long BMP, during which a regimen was tailored to promote daily stool evacuation.FI QOL was measured with the validated Cincinnati Fecal Incontinence Scale (CINCY-FIS), evaluating multiple subscales, including parental stress. Scores were obtained at multiple timepoints following BMP (baseline, 2 weeks, 3 months, 1 year).

Results: Within 2 weeks, BMP participation significantly improved FI with increased frequency of daily daytime voluntary bowel movements (20%-70%, $p < 0.001$) and decreased daily daytime and nighttime involuntary bowel movements (60%-20%, $p < 0.001$; 30%-10%, $p < 0.05$). Marked improvements in CINCY-FIS were observed across multiple QOL subscales, with the greatest in parental stress, and sustained through one year.

Conclusions: BMP results in significant and sustained improvement in FI and QOL for patients and caregivers.

Title: Reducing Constipation-Related Admissions: The Effectiveness of Antegrade Continence Enema Procedures in Children.

Citation: The American surgeon; Jun 2021 ; p. 31348211023429

Author(s): Esparaz, Joseph R; Waters, Alicia M; Mathis, Michelle S; Mortellaro, Vincent E

Objective: Constipation in pediatrics remains a common problem. Antegrade continence enema (ACE) procedures have been shown to decrease the distress of daily therapy. Patients are able to administer more aggressive washouts in the outpatient setting. Therefore, we hypothesize that patients following an ACE procedure would have reduced admissions for constipation.

Methods: Patients who underwent an ACE procedure at a large children's hospital from 2015 to 2018 were included. Demographics, diagnosis, procedure, and preoperative/postoperative hospital admissions were analyzed.

Results: Forty-eight patients were included in the study. Over half were diagnosed with idiopathic constipation. Majority of patients underwent an appendicostomy (88%, n = 42). Preoperatively, 26 patients were admitted for a combined total of 63 times for constipation. Postoperatively, 4 patients were admitted for a total of 5 visits ($P = .021$). Twenty-eight patients required a nonscheduled appendicostomy tube replacement.

Conclusion: This study demonstrates ACE procedures can improve constipation-related symptoms in children and are associated with decrease hospital admissions.

Title: Functional Fecal Incontinence in Children: Epidemiology, Pathophysiology, Evaluation, and Management.

Citation: Journal of pediatric gastroenterology and nutrition; Jun 2021; vol. 72 (no. 6); p. 794-801

Author(s): Rajindrajith, Shaman; Devanarayana, Niranga Manjuri; Thapar, Nikhil; Benninga, Marc Alexander

Abstract: Functional fecal incontinence (FI) is a worldwide problem in children and comprises constipation-associated FI and nonretentive FI. Irrespective of pathophysiology, both disorders impact negatively on the psychological well-being and quality of life of affected children. A thorough clinical history and physical examination using the Rome IV criteria are usually sufficient to diagnose these conditions in most children. Evolving investigations such as high-resolution anorectal and colonic manometry have shed new light on the pathophysiology of functional FI. Although conventional interventions such as toilet training and laxatives successfully treat most children with constipation-associated FI, children with nonretentive FI need more psychologically based therapeutic options. Intrasphincteric injection of botulinum toxin, transanal irrigation and, in select cases, surgical interventions have been used in more resistant children with constipation-associated FI.

Title: Pediatric Dysfunctional Elimination: Cars and Continence-Is Electricity the Future?

Citation: The Journal of urology; Jun 2021; vol. 205 (no. 6); p. 1557-1558

Author(s): Pope, John C

Title: Laparoscopic ligation of ectopic ureter in pediatric patients: a safe surgical option for the management of urinary incontinence due to ectopic ureters.

Citation: Pediatric surgery international; May 2021; vol. 37 (no. 5); p. 667-671

Author(s): Li, Zack; Psooy, Karen; Morris, Melanie; Dharamsi, Nafisa; Retrosi, Giuseppe

Introduction: Ureteric ectopia is a pediatric urinary incontinence cause in girls. It is traditionally managed through hemi-nephrectomy or uretero-ureterostomy, which have the potential for complications including anastomotic stricture, leak, bleeding, and de-vascularization of the functioning renal moiety. Laparoscopic ureteric clipping has been shown to be a good alternative but has not been widely adopted yet. We provide our experience with this technique.

Methods: We retrospectively reviewed the data of 6 patients who underwent laparoscopic clipping of ectopic ureter between 2014 and 2019. We collected the following information: clinical presentation, preoperative and postoperative imaging, age at presentation, age at surgery, operative time, complications, length of stay, length of follow-up, as well as continence outcomes.

Results: Five patients were diagnosed with a duplex system associated with an ectopic upper pole ureter. One patient was noted to have a non-functional kidney associated with an ectopic ureter. Median age at presentation was 5 years (6 weeks-9 years), while at surgery was 8 years (2-13 years). Four patients were referred for incontinence, 1 was referred for antenatal hydronephrosis, 1 presented with urosepsis. The preoperative renal pelvis anteroposterior diameter (APD) was 8.60 cm (median) (6.80-8.70 cm). At the post-operative follow-up, the APD increased to median 9.1 cm (6.80-11.50 cm). Median operative time was 91 min (42-60 min). Complications were seen in only one patient who developed an immediate postoperative urinary tract infection (UTI). Five patients were discharged home the same day of the surgery, while the patient who developed UTI went home on post-operative day 3. Median follow-up was 33 months (22-72 months). Currently, all patients have achieved daytime urinary continence. No patient had UTI during the follow-up period.

Conclusion: Laparoscopic ureteric clipping of the ectopic ureter appears to be a valid alternative to extirpative or reconstructive procedures. Follow-up shows an increase in hydronephrosis without any consequence for the patients. Further studies are necessary to reinforce these observations.

Sources Used:
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