

Children's Continenence

Current Awareness Bulletin

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1. Exploring the Genetic Risk of Childhood Daytime Urinary Incontinence: A Genome-Wide Association Study

Authors: Breinbjerg, Anders;Jørgensen, Cecilie Siggaard;Walters, G. B.;Grove, Jakob;Als, Thomas D.;Kamperis, Konstantinos;Stéfansdóttir, Lilja;Thirstrup, Janne P.;Borg, Britt;Albiñana, Clara;Vilhjálmsson, Bjarni,J.;Eðvarðsson, Viðar Ö;Stefánsson, Hreinn;Mortensen, Preben B.;Agerbo, Esben;Werge, Thomas;Børglum, Anders;Demontis, Ditte;Stefánsson, Kári;Rittig, Søren, et al

Publication Date: 2024

Journal: The Journal of Urology 212(6), pp. 851–861

Abstract: Purpose: Childhood incontinence is stigmatized and underprioritized, and a basic understanding of its pathogenesis is missing. Our goal was to identify risk-conferring genetic variants in daytime urinary incontinence (DUI).; Materials and Methods: We conducted a genome-wide association study in the Danish iPSYCH2015 cohort. Cases (3024) were identified through DUI diagnosis codes and redeemed prescriptions for DUI medication in individuals aged 5 to 20 years. Controls (30,240), selected from the same sample, were matched to cases on sex and psychiatric diagnoses, if any, and down-sampled to a 1:10 case:control ratio. Replication was performed in the Icelandic deCODE cohort (5475 cases/287,773 controls). Single-nucleotide polymorphism heritability was calculated using the genome-based restricted maximum likelihood method. Cross-trait genetic correlation was estimated using linkage disequilibrium score regression. Polygenic risk scores generated with LDpred2-auto and BOLT-LMM were assessed for association.; Results: Variants on chromosome 6 (rs12210989, odds ratio OR] 1.24, 95% CI 1.17-1.32, $P = 3.21 \times 10^{-12}$) and 20 (rs4809801, OR 1.18, 95% CI 1.11-1.25, $P = 3.66 \times 10^{-8}$) reached genome-wide significance and implicated the PRDM13 and RIPOR3 genes. Chromosome 6 findings were replicated ($P = .024$, OR 1.09, 95% CI 1.01-1.16). Liability scale heritability ranged from 10.20% (95% CI 6.40%-14.00%) to 15.30% (95% CI 9.66%-20.94%). DUI and nocturnal enuresis showed positive genetic correlation ($r_g = 1.28 \pm 0.38$, $P = .0007$). DUI was associated with attention-deficit/hyperactivity disorder (OR 1.098, 95% CI 1.046-1.152, $P < .0001$) and BMI (OR 1.129, 95% CI 1.081-1.178, $P < .0001$) polygenic risk.; Conclusions: Common genetic variants contribute to the risk of childhood DUI, and genes important in neuronal development and detrusor smooth muscle activity were implicated. These findings may help guide identification of new treatment targets.

2. Efficacy of Biofeedback Therapy for Giggle Incontinence in Children: How Many Sessions Are Required?

Authors: Canbaz, Furkan Adem;Gerçel, Gonca and Sağ, Sefa

Publication Date: 2024

Journal: Neurourology and Urodynamics

Abstract: Introduction: Giggle incontinence (GI) is characterized by the sudden and involuntary expulsion of urine coinciding with episodes of laughter. The underlying pathophysiology of this condition remains unclear, and various treatment approaches are employed. The objective of this study is to assess the effectiveness of biofeedback (BF) therapy in treating GI and ascertain the requisite number of therapy sessions needed for efficacy.; Methods: Medical records of children treated with BF therapy for GI between November 2022 and November 2023 were retrospectively analyzed. The success of treatment was assessed after four and eight sessions, as well as following three maintenance sessions. Treatment outcomes were evaluated using the scoring system recommended by the International Children's Continence Society (ICCS), which categorizes responses into three levels: no response (Score 0), partial response (Score 1), and complete response (Score 2).; Results: Thirteen patients were initially diagnosed with GI. Of these, 10 patients were included in the study as three discontinued treatments. The cohort comprised an equal gender distribution with five females (50.0%) and five males (50.0%). The mean age of patients was 8.9 ± 3.3 (range 5-16) years. Two out of ten patients had a history of previous treatment for overactive bladder, while three had received

treatment for primary monosymptomatic nocturnal enuresis. Following the completion of all BF sessions, the rate of complete response was observed at 80.0% (n = 8), while the partial response rate accounted for 10.0% (n = 1). Statistical analysis revealed significant differences in response scores after four and eight sessions ($p < 0.01$) as well as between the results after eight sessions and the completion of maintenance sessions ($p < 0.01$).; Conclusion: BF therapy demonstrates a high success rate in managing GI. Completion of at least eight BF therapy sessions enhances the probability of a successful outcome in the treatment of GI. Additionally, it has been observed that maintenance sessions contribute to the increased efficacy of the treatment. (© 2024 Wiley Periodicals LLC.)

Sources Used:

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