Desmopressin improves sleep pattern in patients with nocturnal enuresis.

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Introduction
A comorbidity and a possible causality between nocturnal enuresis, sleep disorders and attention deficit-hyperactivity disorder (ADHD) has been suggested (Yeung, Dhont). This prospective study not only evaluates the beneficial impact of desmopressin melt on sleep, ADHD-symptoms, cognition, quality of life and self-esteem in a random enuresis-population at screening, but as well if the anti-enuretic effect of 6 months desmopressin melt therapy, coincides with amelioration of sleep pattern and other comorbidities.

Material and Methods
31 patients aged 6-16 years with MNE according to the ICCS criteria, who experienced at least 4/7 wet days with proven nocturnal polyuria, defined as nocturnal diuresis >100% bladder volume for age. Patients are tested before the start of desmopressin melt and 6 months later. It is a multi-informant multi-method study, using polysomnography, questionnaires, interviews and neuropsychological testing. Partial preliminary results are now available.

Results
At screening, 9.1 % was diagnosed with the full syndrome of ADHD, 3% with the ADHD hyperactive/impulsive subtype and 18.2% met the criteria of the ADHD inattentive subtype. In total 30.3% was diagnosed with ADHD. 88% (29 of 33) patients have a disrupted sleep at the first polysomnography. They experienced greater than 5 periodic limb movements per sleep hour (PLMS index). The PLMS index ranged between 3.6 and 23.3, mean 10.8 +/- 4.8.

Preliminary results are available in 18(16) patients showing a significant amelioration of the nocturnal enuresis (Wilcoxon matched-pairs signed-ranks test, p=0.002) with 7 full responders, 6 partial responders and 3 non-responders, coinciding with a reduction of the PLMS index in all 18 patients (Wilcoxon, p<0.001).

Conclusion
There are increased prevalences of both PLMS index and ADHD in children with NP. Preliminary results reveal that the anti-enuretic effect of desmopressin correlates strongly with an improved sleep in children with enuresis, since they all experienced a lower PLMS index at the second polysomnomgraphy.