

## COMORBIDITY BETWEEN NOCTURNAL ENURESIS WITH NOCTURNAL POLYURIA, COGNITIVE DYSFUNCTION /ATTENTION DEFICIT HYPERACTIVITY DISORDER AND RESTLESS LEGS SYNDROME?

### Hypothesis / aims of study

There is a comorbidity and a possible causality between nocturnal enuresis (NE), sleep disorders and attention deficit-hyperactivity disorder (ADHD), as suggested by CK Yeung, a theory that has not yet been confirmed, although we found some correlation in an extremely therapy resistant population. If the mismatch between nocturnal diuresis/functional bladder volume, resulting in enuresis has a negative effect on cognitive function and sleep characteristics, then an effective anti-enuretic therapy should ameliorate these comorbid symptoms.

This prospective study evaluate the beneficial impact of desmopressin melt on sleep, ADHD-symptoms, cognition, quality of life and self-esteem in a random enuresis-population.

### Study design, materials and methods

33 patients aged 6-16 years with MNE according to the ICCS criteria, who experience at least 4/7 wet days with proven nocturnal polyuria(NP), 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. Results at screening visit are now available.

### Results

Patients have a significantly disrupted sleep, 29 of 33 (87,88%) children had greater than 5 periodic limb movements per sleep hour (PLMS index). The PLMS index ranged between 3.6 and 23.3, mean 10.82 +/- 4.83. 9.1 % were 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 10 of the 33 (30.3%) children were diagnosed with ADHD.

### Interpretation of results

The preliminary results of the screening data reveal increased prevalences of both PLMS index and ADHD in children with NP in a population of nocturnal enuresis. Although there might be a selection bias of the recruitment in a tertiary study-population, patients did not have the clinical history of therapy resistance as in previous reports.

### Concluding message

The preliminary results of the screening data reveal increased prevalences of both PLMS index and ADHD in children with NP in a population of nocturnal enuresis.

### Disclosures

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