man, vrouw en kind

Universitair Ziekenhuis Gent

DOES DESMOPRESSIN IN CHILDREN WITH MNE INFLUENCE SLEEP AND DAYTIME FUNCTIONING?

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1. Objectives and Study

Nocturnal enuresis affects 10% of the 7-year-old children and is essentially caused by a mismatch between nocturnal bladder capacity and the amount of urine produced during the night together with failure of the child to awaken in response to a full bladder.

Urine overproduction at night or **nocturnal polyuria** (NP) is a major factor contributing to monosymptomatic nocturnal enuresis (MNE) pathophysiology in a large proportion of patients.[3] Since NP is related to an abnormal circadian rhythm of arginine vasopressin (AVP) secretion, the synthetic AVP analogue **desmopressin** is widely used to treat MNE.[4]

Baeyens et al[5] demonstrated an increased prevalence of **attention deficit-hyperactivity disorder** (ADHD) in children with MNE. According to Dhondt et al[6] there is a high incidence of **periodic limb movements** in sleep at night in children with nocturnal enuresis. Those children have an increased cortical arousability leading to awakening. The frequent awakening most likely has an influence on concentration and other ADHD-symptoms in daily life.

This study will assess the impact of desmopressin melt on:

- **ADHD-symptoms**
- **cognition and learning**
- **sleep**
- **quality of life**
- **self esteem**.

2. Methods

Patients aged 6-16 years with MNE according to the ICCS - criteria, who experience at least 4/7 wet days with proven nocturnal polyuria, defined as nocturnal diuresis >100% bladder volume for age on at least 4/7days.

Exclusion criteria are: daytime incontinence resistant to therapy, dysfunctional voiding, poor therapy-compliance, diuretics, antihypertensives, uropathy, renal abnormalities.

Patients are tested before the start of the study medication and 6 months later. Study medication is the oral lyophylisate formulation of desmopressin (melt) at a starting dose of 120µg. If not treatment is not successfull after 1 month, dose could be titrated up to 240µg.

It is a multi-method, multi-informant study. Using polysomnography, questionnaires, interviews and neuropsychological testing.

3. Results/Conclusion

Inclusion is now finished. Results will be expected in September 2012.

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