

NOCTURNAL ENURESIS
THEORETIC
BACKGROUND AND
PRACTICAL GUIDELINES

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Khoa thận-nội tiết


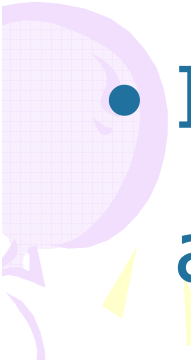


Introduction

- Enuresis or bed wetting is the leakage of urine while sleeping in children aged 5 years or older
- Primary NE who have never been dry at night for an uninterrupted period of at least 6 months

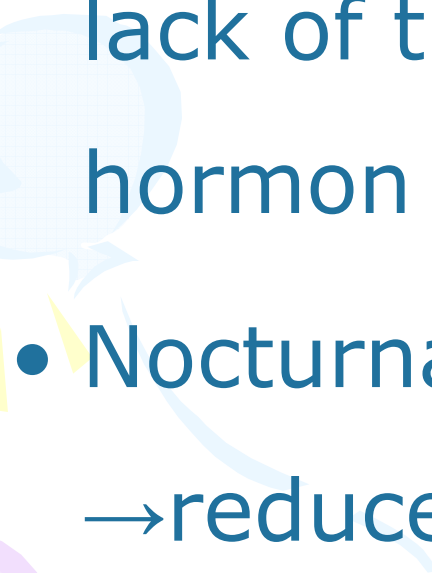



Epidemiology

- Enuresis is a common condition: 5-10% 7 year-olds regularly wet their bed.
 - Enuresis spontaneously resolves in 15% of patients.
 - If left untreated can persist into adulthood for around 3%.
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Etiology and Pathogenesis

- Polyuria is explained by a nocturnal lack of the antidiuretic pituitary hormon vasopressin
 - Nocturnal detrusor overactivity
→ reduce bladder capacity
 - Arousal disorder while asleep
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Comorbidity and consequences


- Low self-esteem as long as they continue to wet their beds
 - Neuropsychiatric disturbances, such as attention deficit hyperactivity disorder(ADHD)(approximately 15%)
 - Depressive problems and problems at school and work
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Treatment





1. Desmopressin

- Desmopressin retains the hormone's antidiuretic effect, reduced urine production.
 - 1/3 of unselected enuretic children: complete response, 1/3: partial response and 1/3: no response.
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Treatment

1. Desmopressin

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- The initial dosage is 240ug- to be taken 0.5-1h before bedtime
 - The lack of a beneficial effect after 1-2 weeks of therapy means that treatment should be stopped
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Treatment

1. Desmopressin

If the response is good, the dosage

should be lowered to 120 µg to

determine whether this is enough to

keep the child dry and then regular

drug-free intervals should be

interspersed to check if the medication is


still needed



Treatment





1. Desmopressin

- Contraindication: polydipsia
 - In order to eliminate the risk for hyponatremia, the child should limit fluid intake to a maximum of 200ml from 1h before medication until the next morning
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Treatment

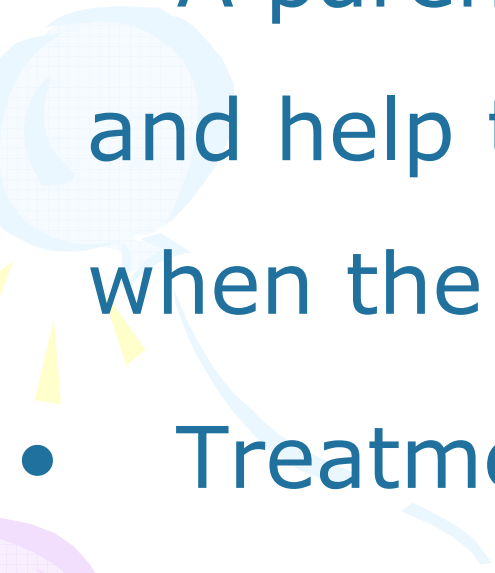

2. Enuresis alarm

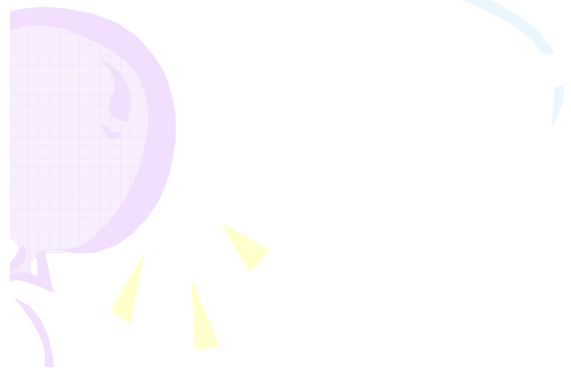
- The first drop of urine that reaches a detector in the bed or the underclothes elicits a strong arousal stimulus, thereby gradually teaching the patient to wake up instead of wetting the bed
 - The response rate: 50-80%
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Treatment

2. Enuresis alarm: rules for successful


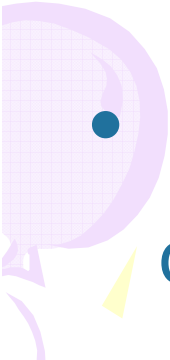
- A parent sleep in the child's room and help them get up immediately when the alarm goes off.
 - Treatment needs to be continuous; no weekend alarm holidays!
 - Follow-up frequently
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Treatment

3. Anticholinergic

- Child with signs of detrusor overactivity: greatest chance of success
 - Constipation and residual urine need to be excluded or treated before anticholinergic treatment
 - The family should be instructed to look out for UTI symptoms
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Treatment

3. Anticholinergic

- Starting dosage of 2 mg, giving 1h before bedtime, increasing to 4 mg & adding desmopressin.
- The successfully treated child should taper therapy at least three to four times per year until staying dry without drug treatment



Treatment

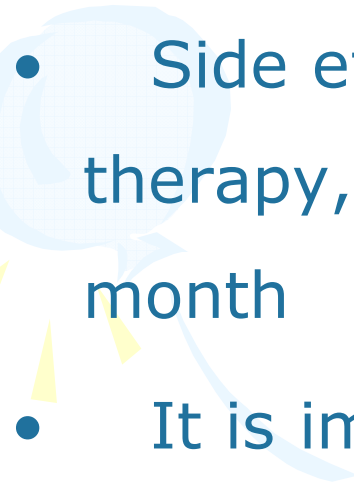

4. Imipramine

Should never be prescribed to a child with a history of unexplained syncope, palpitation, unstable arrhythmias or sudden cardiac death in the family without first ruling out long QT syndrom



Treatment



4. Imipramine

- The dosage of 25-50 mg, taken 1h before bedtime
 - Side effects are common during the first weeks of therapy, the anti-enuretic effect is evident within 1 month
 - It is important to take regular drug holidays to decrease the risk of developing tolerance(2 weeks off medication every 3 months)
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Practical Guidelines



1. First line treatment

- The first treatment for the family who is well-motivated and well informed is the enuresis alarm.
 - Desmopressin is the firstline treatment for families who are not sufficiently motivated to use the alarm.
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Practical Guidelines

2. Secondary therapy

- Anticholinergic treatment is then the treatment of choice.
 - Desmopressin, the alarm & the anticholinergic have all been tried without success, the cautious use of imipramine is warranted.
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THANK YOU !!!

