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TEAM: ONE YEAR FOLLOW-UP OF A NATIONAL, MULTICENTRIC, RETROSPECTIVE ANALYSIS OF OUTCOMES IN 487 NOCTURNAL ENURETIC CHILDREN TREATED WITH AN ANTIDIURETIC IN TWO DIFFERENT MODES

Hypothesis / aims of study

Several authors of monocentric studies described an improvement in outcome of desmopressin treatment when not terminated abruptly but withdrawn progressively. This national multicentric retrospective survey was designed to test whether structured withdrawal of desmopressin can improve outcome and reduce relapse rates in the long-term.

Study design, materials and methods

In this retrospective trial 487 enuretic patients from 181 primary care centres (71% paediatricians, 25% urologists and 4% others) were enrolled. The study was conducted on out-patients with typical age (5-17 years) and gender distribution (35% girls and 65% boys). 267 patients were pre-treated. 361 children could be followed up at least one year after they finished their treatment with comparable proportions in the two groups with either structured withdrawal or abrupt termination. 26% were lost for follow-up after at least one year after end of treatment. Initial severity of enuresis was comparable in both groups (<3nights per week=14%, 3—6 nights per week=42% and >6nights per week=44%). All patients were treated with desmopressin 0.2 or 0.4 mg at bedtime. According to ICCS definitions [(1)] response was subdivided into response (reduction of wet nights <90%), partial response (50-90%) and no response (<50%). After 4-26 weeks treatment was either abruptly terminated or withdrawn progressively by lengthening the treatment intervals (every 2nd day and so on). Relapse was defined as >2 wet nights/month in accordance with the disease definition of more than 2 wet nights per month in the conducting country[(2)].The follow-up data were collected by the investigators by asking if the patients were still dry, if they relapsed and if they had any additional treatment after persistence or relapse.

Results

The group (173 children) with abrupt termination showed 51% response, 27% partial response and 22% no (<50%) response one month after treatment ceased [(1)]. Follow-up one year in 129 patients showed absence of enuresis (<2 wet nights/month) in 72% after termination (65% without any other treatment during that period). Of those who were dry after 1 month follow-up (n=74) 18% relapsed after 1 year [(2)]. Of those who were still wetting >2nights per month after 1 month follow up (n=55) 58% became dry. Five of those 32 patients had additional therapy (Desmopressin, Antimuscarinic and combination of both). 42% (n=23) children were still bedwetting 1 year after their termination of treatment with 19 having additional therapy.

The withdrawal group (314 children) had 72% response, 24% partial response and 4% no response (p<0.0001). After 1 year 232 children could be followed up and 84,5% showed absence of enuresis (77,6% without any other treatment during that period, significantly different from the abrupt termination group, p=0,01). Relapse occurred in 14% of the initially 192 continent patients. Of those 40 patients who were still bedwetting >2nights/month at end of treatment 77,5% became dry with 8 having additional therapy (Alarm, Desmopressin, Antimuscarinic and combination of Desmopressin and Antimuscarinic). All 9 children who were still bedwetting after one year had additional therapy. Pre-treatment had no influence. No severe side effects occurred.

Interpretation of results

Overall this study shows superior long-term treatment outcome compared to former studies. Outcomes in the group with withdrawal of treatment are superior to those with abrupt termination. The maturation rate of 15% published in the literature is increased to 58% in the termination group and to 77% in the withdrawal group. Therefore it might be postulated that desmopressin therapy stimulates the body´s own production of antidiuretic hormone above the level of the 15% spontaneous cure rate per year even after the end of treatment.

Concluding message

This national multicentric retrospective analysis proves that antidiuretic treatment with desmopressin followed by a structured withdrawal program is superior to regular treatment with abrupt termination in enuretic children in both the short and long term and should therefore be the mainstay of treatment. The difference to former published data might be explained by the fact that all children we studied were treated in a primary care setting instead of referral centres as in previous studies.

References

1. ICCS Terminology
2. German Authorities Disease Definition of Enuresis

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**Desmopressin is an approved medication in Germany. Outcome of two different modes of treatment was compared retrospectively. Also it is a non-interventional retrospective data-analysis.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**