

7

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Title: THERAPEUTIC EFFECTS OF IMIPRAMINE AND DDAVP IN THE CHILDREN WITH PRIMARY MONOSYMPTOMATIC NOCTURNAL ENURESIS: A RANDOMIZED PROSPECTIVE STUDY

Aims of study

Nocturnal enuresis is a common disorder causing low self-esteem in children. We evaluated the therapeutic effects of imipramine and DDAVP(desmopressin) in children with primary monosymptomatic nocturnal enuresis by randomized prospective study.

Methods

The study consisted of 23 children, who visited our hospital complaining of monosymptomatic nocturnal enuresis from October 1, 1999 to June 30, 2000. Primary enuretic children, who had at least 7 wet nights a month and no daytime voiding symptom, were eligible for this study. Baseline evaluation at first visit included voiding diary, enuresis diary, uroflowmetry, urine and serum osmolality after water deprivation and electrocardiography. Before the medication, changes of the enuretic episode were recorded for 2 weeks with water restriction. Sixteen children received medication. Six boys and two girls with mean age of 7.9 years, were given 25 mg of imipramine orally just before the bedtime. In the other 8 children, 4 boys and 4 girls with mean age of 7.6 years, DDAVP in the dosage of 0.2 to 0.4 mg was given orally 1 hour before the bedtime. After the medication, changes of the enuretic episode and adverse effects were evaluated for 3 months. Our treatment was considered as responsive when enuretic episodes decreased to 50% or less at the end of study period.

Results

The mean number of wet nights a month was 13.9 with water restriction. After 2 weeks of medication, drug response rate was 50%(4/8) in the imipramine group and 37.5%(3/8) in the DDAVP group respectively. Twelve of 16 children completed 3-month study. The medication was changed from imipramine to DDAVP in two children due to side effects. Children with decreased episode of enuresis to once a week or less were 2 in each imipramine and DDAVP group. After 3 months of study, response rate was 60%(3/5) in the imipramine group and 57.1%(4/7) in the DDAVP group. One child of the DDAVP group became completely dry after treatment. Mean urine osmolality of the response group was lower than that of the no-response group, but there was no significant difference. Mean functional bladder capacity of the no-response group was less than that of the response group, but there was no significant difference. In 12 cases of small bladder in which functional bladder capacity was smaller than the estimated age-adjusted bladder capacity, response rate was 25%(3/12). On the other hand, in cases without small bladder capacity response rate was 100%(4/4). During the study, side effects developed in three children, only in the imipramine group. Among them, one child demonstrated tachycardia on follow-up electrocardiography and another children complained anorexia, insomnia, dry mouth and abdominal pain.

Conclusions

Imipramine and DDAVP had similar therapeutic effects in primary monosymptomatic nocturnal enuresis, but DDAVP is thought to be more effective drug with regard to side effects. Bladder capacity may be one of the predicting factors of the response to drug therapy.

References

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