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COCHRANE SYSTEMATIC REVIEW OF TRICYCLIC AND RELATED DRUGS FOR NOCTURNAL ENURESIS IN CHILDREN

Aims of study

Nocturnal enuresis (night-time bedwetting) is common in childhood, and can cause stigma, stress and inconvenience. We have assessed the effects of tricyclic and related drugs on nocturnal enuresis in children, and compared them with other interventions.

<u>Methods</u>

Randomised trials of tricyclic and related drugs for nocturnal enuresis in children were identified from a wide variety of sources, including MEDLINE, EMBASE, AMED; ASSIA; BIDS; BIOSIS Previews (1985-1996); CINAHL; DHSS Data; PsycLIT and SIGLE. Organisations, manufacturers, researchers and health professionals concerned with enuresis were contacted for further information. Trials were eligible for inclusion if: children were randomised to receive tricyclics compared with placebo, other drugs or other conservative interventions for nocturnal bedwetting; participants with organic causes for their bedwetting were excluded; and baseline assessments of the level of bedwetting were reported. Trials focused solely on daytime wetting were excluded.

Two reviewers independently assessed methodology and quality to identify eligible trials, and extracted data.

When appropriate, meta-analysis was undertaken, using the methods of the Cochrane Collaboration². Categorical outcomes were presented as relative risks, and continuous variables as weighted mean differences. A fixed effects model was used for calculation of 95% confidence intervals.

Results

Twenty two randomised trials of tricyclic or related drugs, involving 1100 children, met the inclusion criteria. The quality of many of the trials was poor. Only single trials compared tricyclic or related drugs with each other, other drugs, desmopressin, alarms or other behavioural interventions.

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Treatment with tricyclic drugs (such as imipramine, amitriptyline, viloxazine, clomipramine and desipramine but not mianserin) was associated with a reduction of about one wet night per week while on treatment (eg using imipramine, WMD -0.99, 95% CI -1.27 to -0.71). Children were almost five times more likely to achieve 14 dry nights with the drugs (eg using imipramine, RR = 4.99, 95% CI 2.4 to 10.40).

Desmopressin and tricyclics appeared equally effective while on treatment, but this effect was not sustained after treatment stopped. However, tricyclics were associated with more adverse effects (83/480, 17.3 per 100 patients) compared with desmopressin (41/579, 7.1 per 100 patients).

There was no detectable difference between imipramine and alarms while on treatment, but afterwards those who had used alarms had one fewer wet night per week (WMD 1.03, 95% CI 0.19 to 1.87).

Conclusions

Treatment with tricyclic drugs (imipramine, amitriptyline, viloxazine, clomipramine and desipramine but not mianserin) was associated with a reduction of about one wet night per week while on treatment, but long term effectiveness is unknown. Desmopressin and tricyclics appeared equally effective while on treatment, but this effect was not sustained after treatment stopped. Alarms may be more effective in the long term. Comparisons between drug and behavioural treatments are needed, and should include relapse rates after treatment is finished.

References

- 1. Lister-Sharp D, O'Meara S, Bradley M, Sheldon TA. A Systematic Review of the Effectiveness of Interventions for Managing Childhood Nocturnal Enuresis (1997). NHS Centre for Reviews and Dissemination, University of York, CRD Report 11.
- 2. Mulrow CD, Oxman AD (eds.). Analysing and Presenting Results. Cochrane Collaboration Handbook [updated September 1997]; Section 8. In: The Cochrane Library [database on disk and CDROM]. The Cochrane Collaboration. Oxford: Update Software; 1997, issue 4.

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