The clinical problem of Bell's palsy: is treatment with steroids effective?

Williamson I G, Whelan T R

Authors' objectives
To assess the effectiveness of steroid treatment for facial recovery in Bell's palsy.

Searching
MEDLINE and databases on BIDS were searched from 1985 to 1995; a handsearch was made using Index Medicus, 1970 to 1995; a systematic review published 1987 was consulted; Science Citation Index was also searched; manufacturers of steroids were contacted.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) and non-randomised comparative studies were eligible.

Specific interventions included in the review
Cortisone 200 mg, decreasing; prednisolone (3 regimens: total 410 mg; 60 mg decreasing, total 760 mg; 30 mg decreasing, total 205 mg); adrenocorticotropic hormone (ACTH).

Participants included in the review
Patients with Bell's palsy, aged 5 to 70 years, were included.

Outcomes assessed in the review
The completeness of, and time to, recovery from facial paralysis was assessed.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection.

Assessment of study quality
The studies included in the meta-analysis were RCTs of steroids, which either used placebo controls or had an untreated control arm. Non-randomised comparative studies were also discussed. Studies where the outcome was difficult to categorize, or which had serious methodological flaws, were excluded. The authors do not state how the papers were assessed for validity, or how many of the authors performed the validity assessment.

Data extraction
Information on recovery rates, study designs, drug regimens, patient numbers and characteristics and severity of palsy was extracted from each study.

Methods of synthesis
How were the studies combined?
A pooled odds ratio was calculated from results of the RCTs using the Mantel-Haenzel method. Other studies were discussed in the narrative.

How were differences between studies investigated?
A chi-square test of heterogeneity was not significant.
Results of the review
Four RCTs (n=141) were included.

77% of patients treated with steroids recovered completely, compared with 64% in the control group. The difference in proportions between groups was 0.12 (95% CI: 0.03 to 0.21). The mean time to complete recovery ranged from 51-63 days in the treated group, compared with 69 days in the untreated group.

Some, but not all, of the non-randomised studies suggest an advantage for steroid treatment. Treatment appears to be more effective when started earlier.

Authors' conclusions
Although the combined evidence from published RCTs shows a significant benefit for steroid treatment, methodological problems mean that this conclusion should be interpreted with caution. The definitive trial of steroid treatment remains to be done.

CRD commentary
This appears to be a reliable review with a good discussion of the issues, based on a thorough search of the literature (including non-English language papers) and appropriate analysis of the data.

Bibliographic details

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.