ABSTRACT

Objectives: To conduct an updated systematic review on the outcome of Bell’s Palsy (BP) in children following steroid treatment.

Methods: MEDLINE, EMBASE, COCHRANE LIBRARY and BIOSIS PREVIEWS databases were searched obtaining articles from years 2000 to 2010 without any language restriction. Articles describing children aged 0-18 years with BP treated solely with corticosteroids were included. The outcome measure was facial movements based on clinical scales.

Results: 2293 papers were initially identified. Following review by 2 authors, 68 papers were analyzed in a hard-copy format. Finally, 6 studies were selected and data was extracted onto a spreadsheet by the two reviewers (table 1).

Quality Assessment
The quality of the eligible studies was assessed according to the criteria established by the Oxford Centre For Evidence-Based medicine (http://www.cebm.net/index.aspx?o=1025).

MATERIALS and METHODS

Identification of Studies
Search strategies were constructed according to the research question and run in MEDLINE, EMBASE, Cochrane Library and BIOSIS Previews. Studies analyzed were retrospective cohorts or case-series and were categorized as level 4 of evidence.

Conclusion: There were no controlled trials and level 4 publications predominate. Therefore, the role of steroid treatment for BP in children is still inconclusive. Further studies are required.

INTRODUCTION

Bell’s palsy (BP) is an idiopathic, acute, unilateral paresis or paralysis of the face consistent with peripheral facial dysfunction.1

The cause of BP is still unclear. Whether associated with vascular ischemia, infection or inflammation, a subsequent compression of the facial nerve in the temporal bone may develop.2,3

Steroids may reduce the inflammatory process, neural edema and compression of the nerve in the facial canal.4

The natural evolution of BP in children is thought to be benign, with spontaneous recovery occurring in up to 90% of children under the age of 14.5-7, the treatment with steroids still remains questionable.8

Corticosteroids are commonly used in Otolaryngology due to their anti-inflammatory properties. Their side effects are widely known and include hyperglycemia, mood alteration, increased risk of gastritis, peptic ulcer formation and gastrointestinal bleeding.

Considering the above mentioned, strong evidence is required in order to determine if steroids benefit children with this condition.

The objective of the current systematic review was to collect and analyze studies published over the last 10-years on the outcome of children with BP who were treated with corticosteroids in order to seek new treatment on the treatment of this clinical entity in the pediatric population.

Outcome Measures
Facial movements based on different clinical scales such as House-Brackmann (HB), electrophysiological testing or other clinical scales were employed as the outcome measures.

Data Extraction
Two investigators independently reviewed the titles and abstracts of the initial search results for relevant studies. A comparison of the studies was then performed by two reviewers and any disagreement was resolved by discussion. The second list was reviewed with hard copy formats of the articles. Whenever details such as number of pediatric patients in a series or treatment measures were not clearly expressed in the publication, authors were contacted in order to obtain further information. After screening the second list, the final eligible studies were selected and data was extracted onto a spreadsheet by the two reviewers (table 1).

RESULTS

• 2293 publications were obtained. Following independent review by the two reviewers, 68 papers were selected for further analysis in hard copy formats. Finally, six studies were eligible to be included in the systematic review.

• All eligible studies included exclusively the pediatric population.

• Studies originated from Taiwan, China, Japan and Thailand.

• Five studies seemed to be retrospective cohorts and one was a case series.

• There was inconsistency with regard to exact length of treatment, outcome measures and maximum follow-up time.

• None provided evidence of benefit from steroid treatment.

• All included studies were graded as level 4 of evidence.

CONCLUSIONS

The current systematic review demonstrated the lack of evidence to answer the question whether children with BP would benefit from steroid treatment. Therefore, the role of steroid treatment for BP in children remains inconclusive. Further studies, preferably prospective trials, are required in order to evaluate this treatment modality.

REFERENCES