S12

Effectiveness of early orthopaedic treatment with headgear: a systematic review and meta-analysis


Background

Although headgear has been used extensively to correct anteroposterior discrepancies, its treatment effects have not yet been adequately assessed in an evidence-based manner. The aim of this systematic review was to assess the therapeutic and adverse effects of early headgear treatment in an evidence-based approach.

Study Information

Population – patients of any age or sex with Class II malocclusion
Intervention – early treatment with headgear
Comparison – untreated matched Class II patients
Outcome – lateral cephalometric measurements, treatment effectiveness, adverse events like dental trauma or temporomandibular joint (TMJ) pain.

Search Parameters

Inclusion criteria – randomized clinical trials and prospective controlled non-randomized studies
Databases searched – MEDLINE, Cochrane Library, Scopus, Web of Knowledge, and Virtual Health Library
Dates searched – from inception to December 2015
Other sources of evidence – hand searching of reference/citation lists and author communications
Language restrictions – none.

Search Results

830 references were identified; 15 unique studies from 44 papers met the inclusion criteria.

<table>
<thead>
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<th>Design</th>
<th>Number of studies</th>
<th>Risk of bias</th>
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<td>Case report or case series</td>
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Study Results

The outcome measures for use of headgear versus controls for (A) phase 1 and (B) phase 2 treatments are shown in Table S12.1.
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Commentary

The effect of headgear on maxillary rotation, nasolabial angle, reduction in PAR scores, and signs of temporomandibular disorders could not be robustly assessed due to limited evidence of low quality.