

Temporomandibular disorders in growing patients after treatment of class II and III malocclusion with orthopaedic appliances: a systematic review

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Objective: To determine if the use of orthopaedic appliances in growing patients applied to correct Class II and III malocclusion is related to the development of temporomandibular disorders (TMD).

Material and methods: A systematic review was conducted between 1960 and July 2017, based on electronic databases: PubMed, Cochrane Library, Embase, Medline, Scopus, EBSCOhost, Scielo, Lilacs and Bireme. Controlled clinical trials (CCTs) and randomized controlled trials (RCTs) were identified. The articles were selected and analyzed by two authors independently. The quality of the evidence was determined according to the guidelines of the Cochrane Risk Bias Assessment Tool and the Cochrane Quality Study Guide. **Results:** Seven articles were included, four CCTs and three RCTs. The studies were grouped according to malocclusion treatment in (a) class II appliances (n = 4) and (b) class III appliances (n = 3). The quality of evidence was low due to the high risk of bias, independent of the association reported. All studies concluded that the use of orthopaedic appliances would not contribute to the development of TMD. **Conclusions:** The quality of evidence available is insufficient to establish definitive conclusions, since the studies were very heterogeneous and presented a high risk of bias. However, it is suggested that the use of orthopaedic appliances to correct class II and III malocclusion in growing patients would not be considered as a risk factor for the development of TMD. High-quality RCTs are required to draw any definitive conclusions. © 2017 Acta Odontologica Scandinavica Society.

Class II

class III

dentofacial orthopaedics

temporomandibular disorders

temporomandibular joint

complication

human

malocclusion

orthodontics

orthopedics

procedures

risk assessment

temporomandibular joint disorder

treatment outcome

Humans

Malocclusion, Angle Class III

Orthodontics, Corrective

Orthopedics

Risk Assessment

Temporomandibular Joint Disorders

Treatment Outcome