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lingua: Inglese

Treatment of ankylosed deciduous molars with or without permanent successors in children and adolescents: a systematic review

Fabio SAVOLDI ¹ , Domenico DALESSANDRI ², Arianna GARDONI ², Simona DIANISKOVA ³, Stefano BONETTI ², Luca VISCONTI ²

¹ Orthodontics, Division of Pediatric Dentistry and Orthodontics, Faculty of Dentistry, The University of Hong Kong, Hong Kong S.A.R.; ² Dental School, Department of Medical and Surgical Specialties, Radiological Sciences and Public Health, University of Brescia, Brescia, Italy; ³ Department of Orthodontics, Faculty of Medicine, Slovak Medical University, Bratislava, Slovakia

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INTRODUCTION: The aim of this systematic review was to provide guidelines for decision-making during orthodontic treatment planning of infra-occluded deciduous molars with or without their successors in children and adolescents.

EVIDENCE ACQUISITION: Computerized search was conducted on Medline *via* PubMed, and Cochrane Library. Articles published until 2020 in English language were analyzed following the Preferred Reporting Items for Systematic Reviews (PRISMA) Checklist. Observational and interventional longitudinal studies reporting the treatment of ankylosed deciduous molars with or without successor tooth in 3 to 15-year-old patients were included.

EVIDENCE SYNTHESIS: In case of ankylosis with presence of successor, exfoliation took place in 77% of teeth, while extraction involved 23%. Infra-occlusion happened in 53% of teeth (worsening in 52%), alveolar bone loss in 37%, mesial tipping of first permanent molar in 5%, and over-eruption of antagonist in no cases (after exfoliation and eruption of successor). In case of ankylosis without successor, exfoliation took place in 1% of teeth, progression of infra-occlusion in 42%, progression of root resorption in 58%, development of mesial tipping of first permanent molars in 25%, while no case of antagonist over-eruption was reported.

CONCLUSIONS: When the permanent tooth is present and the ankylosed tooth is slightly or moderately infra-occluded, observation is appropriate. In case of severe infra-occlusion or absence of successor, tooth extraction may be considered together with orthodontic space closure, transplantation, or prosthetic replacement. Alternatively, nonextraction and a prosthetic build-up may be considered.

KEY WORDS: Ankylosis; Tooth, deciduous; Molar; Dental occlusion