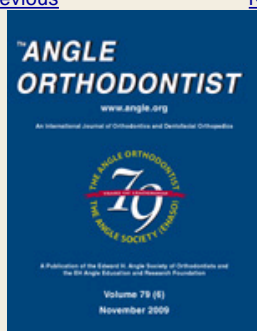


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Original Articles

Early Headgear Effects on the Eruption Pattern of the Maxillary Canines

Anna-Sofia Silvola^a, Päivi Arvonen^a, Johanna Julku^a, Raija Lähdesmäki^a, Tuomo Kantomaa^b, and Pertti Pirttiniemi^c

Abstract

Objective: To test the null hypothesis that early headgear (HG) treatment has no effect on the eruption pattern of the maxillary canines in the early mixed dentition.

Materials and Methods: Sixty-eight children (40 boys and 28 girls) with a Class II tendency in occlusion and moderate crowding of the dental arches were randomized into two groups. HG treatment was initiated immediately in the first group. In the second group only minor interceptive procedures were performed during the first follow-up period of 2 years. Orthopantomograms were taken at the baseline, three times at 1-year intervals, and after growth at the age of 16. Eruption geometry was performed. The space from the maxillary first molar to the lateral incisor was measured on the dental casts.

Results: The inclination of the maxillary canine in relation to the midline appeared to be significantly more vertically oriented on the right side in the HG group 1 and 2 years after starting the HG therapy ($P = .0098$ and $P = .0003$, respectively). The inclination in relation to the lateral incisors was smaller in the HG group bilaterally after 1 year and 2 years of HG treatment, and on the right side after 3 years of treatment.

Conclusion: The hypothesis is rejected. Early HG treatment significantly affects the inclination of the maxillary canine during eruption. The strongest influence was seen after 2 years of HG use, more prominently in the right-side canine.

Keywords: [Maxillary canine](#), [Orthodontic treatment](#), [Headgear](#), [Crowding](#), [Radiogrammetry](#)

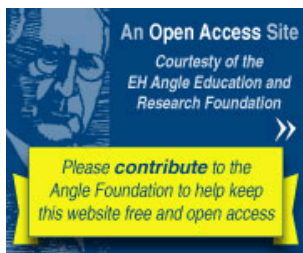
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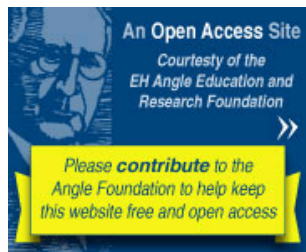
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