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Tooth rotation associated with aplasia of nonadjacent teeth

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ABSTRACT

The prevalence of tooth rotation concomitant with aplasia of nonadjacent teeth in uncrowded, nonsyndromic subjects was assessed. The sample consisted of 1620 subjects (mean age 14 years 9 months). The findings were compared with the prevalence calculated for a matched control group of 1000 subjects. Rotation of maxillary lateral incisors in subjects with premolar aplasia and rotation of premolars in subjects presenting with maxillary lateral incisor aplasia were studied. Associations between both tooth position anomalies and tooth aplasia were significant ($p < 0.01$). In addition, the presence of rotated maxillary lateral incisors was also associated with aplasia of the homologous tooth on the opposite side of the dental arch; the same result was found for premolars. These data suggest a genetic component in the etiology of tooth malpositions, such as tooth rotation, which may be considered a covariable in a complex of genetically controlled dental disturbances, including tooth aplasia.

KEY WORDS: Tooth rotation, Tooth malpositions, Tooth agenesis, Missing teeth, Malocclusion, Dental genetics.

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