

Dental anomalies and external apical root resorption occurring during orthodontic treatment: a retrospective radiographic study of maxillary central incisor*

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ABSTRACT

Apical root resorption is one of the principal undesirable side effects associated with orthodontic treatment. It is provoked by a number of etiological causes, most often mechanical in nature and can be aggravated by biological factors that are not yet clearly understood. The objective of our study was to determine the influence of anomalies in dental organogenesis on the occurrence of root resorption. We analyzed the radiographs of maxillary incisors taken before and after treatment of 85 patients observed by the same practitioner. The results of our study suggest that patients with dental anomalies, anomalies of dental conformation, especially of the type of microdontia/thin root, have an increased risk of suffering from apical root resorption of maxillary central incisors during the course of orthodontic treatment.

KEYWORDS

External apical root resorption

Dental anomaly

Orthodontic treatment

Risk factors

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* The English version of this paper is not available; to read the French version, go to <http://odf.edpsciences.org/10.1051/odf/2009004>