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Orthodontic treatment: Real risk for age estimation in adults ?

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Dental age estimation is a challenge once root formation has finished in all teeth. In living adults, the most commonly used methods are based on the formation of secondary dentine. Some of the possible side effects of orthodontic treatment are the formation of secondary dentine and root shortening. The aim of this study was to establish if the secondary dentine formation from orthodontic treatment could generate a statistically significant difference in dental age estimations when Kvaal et al method was applied on living adults. This method is based on linear measurements of pulp/tooth length and pulp/tooth width. The study sample included 34 pairs of pre- and post-orthodontic treatment panoramic radiographs, from different individuals with exactly the same age and sex distribution. Females (n=22, 65%) age range 15-50 years old, median 17.5, and males (n=12, 35%) age range 16-37 years old, median 22.5 were included. Dental age was estimated per tooth using formulae previously published. The risk of over-estimating of age was calculated. (RR=1.007). The changes caused by orthodontic treatment do not have any significant effect on age estimation when Kvaal et al method is applied on panoramic radiographs.

Biography

Talia Y Marroquin is a Dental Specialist (Endodontist) from The National University of Colombia, who is currently completing her Doctorate at The University of Western Australia. Although she enjoys the clinical dental practice, she is also member of different research groups in Colombia and Australia, and is highly interested in contributing to the scientific development of dentistry and forensic dentistry. Her research project is focused on dental age estimation in adults aimed to find out a method that can be reliable to be systematically applied across the globe. Her research counts with international collaboration.

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