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Applicability of Cameriere's Age Estimation Method in a Sample of Turkish Adults

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Abstract : The strong relationship between the reduction in the size of the pulp cavity and increasing age has been reported in the literature. This relationship can be utilized to estimate the age of an individual by measuring the pulp cavity size using dental radiographs as a non-destructive method. The purpose of this study is to develop a population specific regression model for age estimation in a sample of Turkish adults by applying Cameriere's method on panoramic radiographs. The sample consisted of 100 panoramic radiographs of Turkish patients (40 men, 60 women) aged between 20 and 70 years. Pulp and tooth area ratios (AR) of the maxilla¬¬ry canines were measured by two maxillofacial radiologists and then the results were subjected to regression analysis. There were no statistically significant intra-observer and inter-observer differences. The correlation coefficient between age and the AR of the maxillary canines was -0.71 and the following regression equation was derived: Estimated Age = 77,365 – (351,193 × AR). The mean prediction error was 4 years which is within acceptable errors limits for age estimation. This shows that the pulp/tooth area ratio is a useful variable for assessing age with reasonable accuracy. Based on the results of this research, it was concluded that Cameriere's method is suitable for dental age estimation and it can be used for forensic procedures in Turkish adults. These instructions give you guidelines for preparing papers for conferences or journals.

Keywords : age estimation by teeth, forensic dentistry, panoramic radiograph, Cameriere's method
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