



F7 Age Estimations on Third Molar Development: A Comparison of Nine Samples From Populations With Different Nationality

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After attending this presentation, attendees will become aware of how dental age estimation methods used to discriminate the age of majority of unaccompanied asylum seekers preferably are based on a reference sample including subjects from equal origin as the examined individual.

This presentation will impact the forensic science community by providing reference samples for age estimations on third molar development containing subjects with equal skin color and nationality. Moreover, the analysis of the separate country outcomes will offer forensic investigators legally unquestionable tools when performing age estimations on asylum seekers from equal geographic origin.

Worldwide unaccompanied asylum seekers enter countries claiming to be minor and accordingly request corresponding legal facilities. The authorities of the country they arrive have to discriminate on ethical, legal, and scientific base whether the questioned person passed the chronological age of majority to be able to judge them correctly. Only age estimation methods based on samples obtained from geographically equally localized populations as the investigated individual can offer total legal and scientific proof. The most frequently used dental age estimation method for estimating the age of majority is based on the radiologically obtained third molar developmental stage. The aim of this study is to collect referral third molar developmental scoring data bases of samples containing subjects of equal nationality and skin color. Secondly the obtained data will be analyzed and compared to detect possible specific geographic related information.

From nine different countries (e.g., Belgium, China, Japan, North-India, Poland, Saudi-Arabia, South-Korea, Thailand, and Turkey) samples were collected. The same selection criteria as published in detail related to the Belgium and Thai dataset were used. The obtained results were statistically described, analyzed, and the country specific outcomes mutually compared.

A main forensic research topic is to know if, for instance, a Belgium reference population can be used to assess age of non-Belgium subjects and what the clinical consequences are. Therefore, a Belgium control data set was developed to verify the performance of the use of Belgium (data) as reference compared with the use of the country specific reference (data). This Belgium control data set was established following the same protocol as for the development of the country specific test data bases.

This worldwide collection of orthopantomograms can continuously extend and provide the forensic odontological community with a legally reliable reference data base when discriminating the age of majority of unaccompanied asylum seekers with known nationality.

Dental Age Estimation, Unaccompanied Asylum Seekers, Geographical Comparison