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Title:

DENTAL MATURITY IN CHILDREN IN FYR OF MACEDONIA: AN EVALUATION OF THE INTERNATIONAL MATURITY STANDARDS

Preferable Presentation type:

Poster Presentation

Area of view:

Paediatric Dentistry

Background: French-Canadian standards by Demirjian for dental age estimation in children show lower accuracy when allied in other populations. The international maturity standards were calculated and maturity curves were created by evaluation of maturity standards from eight different populations, in order to predict the dental age with more confidence when the ethnic origin was unknown. Aim: Aim of this study was to evaluate the accuracy of international maturity standards on the sample of panoramic radiographs (OPG) of 350 girls and 330 boys, aged from 6.06 to 12.97 years from the area of the city of Skopje in FYR of Macedonia. Method: Seven permanent teeth from left side of lower jaw were scored using Demirjian stages. Kappa score for intra- and inter-rater agreement was tested by evaluation of 50 randomly selected OPGs. Dental maturity score was calculated and dental age was found from the 50th percentile maturity curve for maturity score for each child. Results: Cohen Kappa score was 0.86 for intra-rater and 0.80 for inter-rater agreement. Dental age statistically significantly overestimated real age by 0.32 ± 0.88 years in girls ($p < 0.001$) and 0.49 ± 0.98 in boys ($p < 0.001$). Conclusion: These results show that international maturity standards are more appropriate than French-Canadian standards for age estimation on children in FYR of Macedonia but also suggest the need for development of region-specific dental maturity standards.