

Third molar development in a modern Danish 13-25 year old population

Sara Arge ¹

Niels Dyrgaard Jensen ¹

Niels Lynnerup ¹

¹ Department of Forensic Pathology, Institute of Forensic Medicine, University of Copenhagen

Corresponding author:
sara.arge@sund.ku.dk

POSTER PRESENTATION

J Forensic Odontostomatol
2017 Nov 1; Supp1(35): 86
ISSN :2219-6749

ABSTRACT

Objectives: Third molar development is widely used to assess the age of adolescents with an undocumented chronological age – often to assess if the individual is over or under the age of 18. Several studies describing third molar development in different populations exist. In this study we wanted to develop a reference material based upon a modern Danish population. The collected data is intended for further analysis using Transition Analysis.

Materials and methods: Upper and lower third molars in 1302 digital panoramic images of individuals aged 13-25 (669 female/633 male) were staged following a modification to Gleiser and Hunts 10-stage scoring method. Inter- and intraobserver variations were analyzed. The stages were evaluated by looking at the transition from one stage to the next, with special emphasis on the transition from stage 9 to 10 – the final transition.

Results: Both inter- and intraobserver analysis showed good to very good agreement. In the female population none of the subjects younger than 18 had transitioned from stage 9 to 10 in the mandibular third molars. In the male 17 year old population 6/90 mandibular third molars had transitioned from stage 9 to 10 and the same for 1/108 of the mandibular third molars in 16 year old males. This suggests that in a modern Danish population third molar development can be used with higher accuracy for females in assessing whether or not an individual is over or under the age of 18.