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Dental age estimations in a prenatal cadaveric population

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The state of development and emergence of the deciduous dentition is fundamental to the accurate estimation of age in paediatric and juvenile individuals. However little is understood about the growth of the immature mandible relative to the development of the deciduous dentition. The aim of the study is to investigate the configuration of the dental crypts relative to the developing deciduous dentition in individuals aged between 20 gestational weeks and 4 years. 30 mandibles were sourced from the Johannesburg Forensic Paediatric Collection, Division of Forensic Medicine and Pathology, University of the Witwatersrand. Micro-CT analysis was conducted using a Nikon Microfocus X-ray machine and reconstructions were completed using volume rendering software VG studio max v2.2. The anterior dental crypts were found to differentiate relative to the completion of the deciduous dental development. However the premolar dental crypts were defined before full dental developmental was complete. The dentition was also noted to commence its development from the buccal side of the tooth moving in a lingual direction. Thus the mandible develops in response to biomechanical forces placed on the developing dentition.

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Maybe

Primary author: Ms HUTCHINSON, Erin (School of Anatomical Sciences, University of the Witwatersrand)

Co-authors: Prof. KRAMER, Beverley (School of Anatomical Sciences, University of the Witwatersrand); Prof. KIESER, Jules (Sir John Walsh Research Institute, University of Otago)

Presenter: Ms HUTCHINSON, Erin (School of Anatomical Sciences, University of the Witwatersrand)

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