[3] Gardiner BJ, Stewardson AJ, Abbott IJ, Peleg AY. Nitrofurantoin and fosfomycin for resistant urinary tract infections: old drugs for emerging problems. Aust Prescr. 2019 Feb;42(1):14-19.

[4] Ghazvini H, Taheri K, Edalati E, Sedighi M, Mirkalantari S. Virulence factors and antimicrobial resistance in uropathogenic Escherichiacoli strains isolated from cystitis and pyelonephritis. Turk J Med Sci. 2019 Feb 11;49(1):361-367.

POSTER 81

Sex estimation in children using dental techniques: a review

Cármen Valente[1*], Alexandra Teixeira[2], Inês Morais Caldas[2,3,4]

[1]*Instituto de Ciências Biomédicas Abel Salazar da Universidade do Porto.*

[2]*TOXRUN – Toxicology Research Unit, University Institute of Health Sciences, CESPU, CRL, 4585-116 Gandra, Portugal.*

[3]*Faculdade de Medicina Dentária da Universidade do Porto.*

[4]*CFE – Centro de Ecologia Funcional, Universidade de Coimbra.*

*✉*up199704667@edu.icbas.up.pt*

Doi: https://doi.org/10.51126/revsalus.v4iSup.348

Resumo

Introduction: Sex estimation is one of the most crucial steps in the biological profile reconstruction of unknown individuals, in archeological and forensic practice. In children, sex estimation is particularly difficult since the more accurate sex discriminating features of the pelvis and skull are not yet fully developed. Both permanent and deciduous teeth present sexual dimorphism and are the most frequently recovered physical elements, due to their hardness, durability, and resistance to postmortem insults, as they are highly resistant to destruction. Thus, dental techniques may have an important role in sex estimation in children. Yet, to the best of the authors' knowledge a systematization of these techniques has not yet been performed. **Objective:** The aim of this work is to perform a review of the dental techniques available for sex estimation in children. **Methods:** A literature search was performed in 2 databases: PubMed and Scopus. No temporal limits were established. The keywords used were "sex estimation" AND teeth AND children, "sex estimation" AND dental techniques AND children, "sex estimation" AND dental techniques AND infants, "sex estimation" AND dental techniques AND subadults, "sexual dimorphism" AND teeth AND children. Meta-analysis, systematic review and opinion articles were excluded. Papers were checked for duplicates and then for relevance, reading the title, the abstract and finally the full-text. **Results:** We retrieved 281 studies, 119 in PubMed and 162 in Scopus. After excluding duplicates, 194 were eligible. After reading the title, 33 were considered eligible, and from these, 20 were eligible after review of abstract; only 14 were selected after reading the full-text. Dental sex estimation methods were odontometric techniques, based on metric dental measurements (linear, diagonal, areas) and morphometric techniques, based on morphometric traits (such as, Carabelli cusp and number of cusps). Odontometric techniques allow to estimate sex in children with an accuracy between 78.1-93.1% [1], 87.2-88% [2], 68% [3], 90.9% [4]. The morphometric techniques allow to estimate sex in children with and accuracy between 83.17-93.23% [5]. **Conclusion:** Multiple studies have been made to find a reliable sex estimation technique to be use in dental identification, in children. Odontometric techniques seem to be the most accurate dental sex estimation method, with a high accuracy between 78.1- 93.1%, with mesiodistal, buccolingual, and diagonal crown and cervical diameters of first and second deciduous molars.

Keywords: sex estimation; children; infants; subadults; sexual dimorphism; teeth