A cold case solved? Thank (perhaps) the teeth

Publication info: Dentistry today 33.9 (Sep 2014): 48, 51.

MeSH: Forensic Anthropology (major); Forensic Dentistry (major); Geography, Medical; Humans; Isotopes -- analysis; Lead -- analysis (major); Tooth -- chemistry (major); United States

Journal classification: Dental Journals

Substance: Substance: Isotopes; CAS: 0 ; Substance: Lead; CAS: 2P299V784P;

Language: English

Document type: News

Publication title: Dentistry today

Volume: 33

Issue: 9

Pagination: 48, 51

ISSN: 8750-2186, 8750-2186 (ISSNLinking)

Publication type: Journal

Journal code: 9005357

Publisher location: UNITED STATES

Notes: Publication model: Print;; Cited medium: Print

Publication date: Sep 2014

Date created: 2014-10-06

Date completed: 2014-10-23

Medline document status: MEDLINE

Source attribution: Medline, © Publisher specific

Accession number: 25283017

First available: 2014-10-07


Database: MEDLINE®; 1946 to date (1946 - current)

Does contextual information bias bitemark comparisons?

Author: Osborne, Nikola K P1; Woods, Sally2; Kieser, Jules2; Zajac, Rachel3
A growing body of research suggests that the interpretation of fingerprint evidence is open to contextual bias. While there has been suggestion in the literature that the same might apply to bitemarks - a form of identification evidence in which a degree of contextual information during the comparison phase is generally unavoidable - there have so far been no empirical studies to test this assertion. We explored dental and non-dental students' ability to state whether two bitemarks matched, while manipulating task ambiguity and the presence and emotional intensity of additional contextual information. Provision of the contextual information influenced participants' decisions on the ambiguous bitemarks. Interestingly, when participants were presented with highly emotional images and subliminally primed with the words 'same' and 'guilty', they made fewer matches relative to our control condition. Dental experience also played a role in decision-making, with dental students making more matches as the experiment progressed, regardless of context or task ambiguity. We discuss ways that this exploratory research can be extended in future studies.
A test of the Lamendin method of age estimation in South African canines

Author: Ackermann, Anja1; Steyn, Maryna2

1Forensic Anthropology Research Centre, Department of Anatomy, University of Pretoria, Pretoria, South Africa 2Forensic Anthropology Research Centre, Department of Anatomy, University of Pretoria, Pretoria, South Africa. Electronic address: maryna.steyn@up.ac.za

Abstract (English): Age estimation in unknown adult skeletons remains a considerable problem in forensic anthropology. In 1992, Lamendin et al. published a non-destructive method of age estimation on single rooted teeth. With this method, periodontosis and root transparency are judged against root height, and these are then used in regression formulae to estimate age. The aim of this study was to test the accuracy of the Lamendin method on a large sample of canines of South Africans, and if necessary to adapt the formulae for this population. A sample of known sex, age and population group was used. This included 537 upper and lower canines from 498 skulls, and included black males, black females, white males and white females. The age of the individuals ranged from 20 to 90 years. The original formulae gave relatively poor results, and in an attempt to obtain better accuracy the formulae were adapted with the current data. Even after adaptation of the formulae, the highest correlation between estimated age and actual age remained low (R^2=0.41), with mean errors ranging between 12 and 15 years. Periodontosis was better correlated with age than root
transparency. The accuracy of the method was found to be much lower than what was originally published, but probably reflects biological reality and is on a par with other methods of adult age estimation.

MeSH: Adult; African Continental Ancestry Group; Age Determination by Teeth -- methods (major); Aged; Aged, 80 and over; Aggressive Periodontitis -- pathology (major); Cuspid -- anatomy & histology (major); European Continental Ancestry Group; Female; Forensic Dentistry; Humans; Male; Middle Aged; Regression Analysis; South Africa; Tooth Root -- anatomy & histology (major); Young Adult

Journal classification: Index Medicus

Identifier (keyword): Age estimation, Canines, Forensic anthropology, Periodontosis, Root height, Root transparency

Correspondence author: Ackermann, Anja Forensic Anthropology Research Centre, Department of Anatomy, University of Pretoria, Pretoria, South Africa.

Language: English

Language of abstract: English

Document type: Journal Article, Research Support, Non-U.S. Gov't

Publication title: Forensic science international

Volume: 236

Pagination: 192.e1-6

ISSN: 0379-0738 (ISSNLinking)

Electronic ISSN: 1872-6283

Publication type: Journal

Journal code: 7902034

Publisher location: IRELAND

Notes: Publication model: Print-Electronic; Cited medium: Internet

DOI: http://dx.doi.org/10.1016/j.forsciint.2013.12.023

PII: S0379-0738(13)00546-X

Publication date: Mar 2014

Date created: 2014-02-17

Date completed: 2014-10-29

Medline document status: MEDLINE

Electronic publication date: 2014-01-06
Sex determination using mandibular anthropometric parameters in subadult Iranian samples

Author: Akhlaghi, Mitra1; Khalighi, Zahra2; Vasigh, Shayesteh3; Yousefinejad, Vahid3
1Forensic Medicine Department, Tehran University of Medical Sciences, Tehran, Iran; Research Center of Legal Medicine Organization of Iran, Tehran, Iran2Internal Medicine Department, Ilam University of Medical Sciences, Ilam, Iran. Electronic address: zahrakhalighi@yahoo.com3Forensic Medicine Department, Tehran University of Medical Sciences, Tehran, Iran


Abstract (English): INTRODUCTION

Sex determination is the first step in the identification of corpses and skeletal remains. The mandible is the largest and strongest bone of the face and has high durability. It is known that skeletal features vary by population, thus the need to establish population-specific standards. In this study, for the first time, we investigated mandibular anthropometric parameters for sex determination in subadult Iranian cadavers.

METHODS

Eight mandibular anthropometric parameters were measured in 45 Iranian cadavers below the age of 20 (23 males and 22 females corpses), and the relationships of these variables with gender were determined. Collected data were analyzed using descriptive analysis, ROC curve, cross tabulation and discriminant analysis in SPSS 13.

RESULTS

No significant statistical difference was seen in the mandibular anthropometric values between the two genders in samples below the age of 12. In the 12-19 age group, accuracy of symphysial height and bigonial breadth in differentiation of gender was 69% and 86.2% respectively.

CONCLUSION

Although mandibular anthropometric parameters are not helpful in sex determination below the age of 12, if for some reasons such as explosions, air disasters and other accidents, only the mandible is
available, symphysial height and mandibular bigonial breadth could be used to determine the gender with high accuracy.

MeSH: Adolescent; Cephalometry; Child; Child, Preschool; Discriminant Analysis; Female; Forensic Dentistry; Humans; Iran; Male; Mandible -- anatomy & histology (major); ROC Curve; Sex Determination by Skeleton -- methods (major); Young Adult

Journal classification: Index Medicus
Identifier (keyword): Anthropometric parameters, Forensic identification, Mandible, Sex determination, Subadult

Correspondence author: Akhlaghi, Mitra Forensic Medicine Department, Tehran University of Medical Sciences, Tehran, Iran; Research Center of Legal Medicine Organization of Iran, Tehran, Iran.

Language: English
Language of abstract: English
Document type: Journal Article, Research Support, Non-U.S. Gov't
Publication title: Journal of forensic and legal medicine
Volume: 22
Pagination: 150-3
ISSN: 1752-928X (ISSNLinking)
Electronic ISSN: 1878-7487
Publication type: Journal
Journal code: 101300022
Publisher location: ENGLAND
Notes: Publication model: Print-Electronic; Cited medium: Internet
DOI: http://dx.doi.org/10.1016/j.jflm.2013.12.006
PII: S1752-928X(13)00322-3
Publication date: Feb 2014
Date created: 2014-02-03
Date completed: 2014-10-16
Medline document status: MEDLINE
Electronic publication date: 2013-12-18
Source attribution: Medline, © Publisher specific
Accession number: 24485441