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Sexual diamorphism- An odontometric approach

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Abstract

Teeth being the most stable tissue in the body provide one of the best records for forensic investigation. Tooth morphology is influenced by cultural, environmental and racial factors. Present study attempts to establish the applicability of human dentition in sexual dimorphism in Indian population. It focuses to measure the odontometric parameters (i.e. mandibular canine width, mandibular intercanine distance, mandibular premolar and molar arch width), calculate dental indices (i.e. mandibular canine index, mandibular premolar and molar indices) and thereby prove their efficacy in determining the sex of an individual. This cross sectional prospective study was carried out on 200 MBBS students of Kasturba Medical College, Mangalore. After taking written informed consent the intraoral odontometric parameters were measured and the data was then analysed using SPSS version, 11.5. Results showed that mandibular canine width, mandibular canine index, mandibular premolar arch width, mandibular incisors width, premolar index and molar index shows significant difference (p value< 0.001) between males and females. Maximum sexual dimorphism exists in mandibular canine width (12.678) and mandibular canine index (12.639), while mandibular molar arch width and intercanine distance have no applicability in sex identification. Maximum correlation is shown by mandibular canine width (0.657) and least by molar index (0.393). The predictive value of sexing a person is highest by using mandibular canine width alone (43.2%). The usefulness of dentition as an aid in gender determination by odontometric analysis is well supported. Mandibular teeth and in particular the mandibular canine can form the key in gender differentiation.

Biography

Prateek Rastogi has completed his MD (Forensic Medicine) at the age of 27 years from Manipal University, India. He is presently working as an Associate professor at Kasturba Medical College, Mangalore, India. He has published 88 papers and has contributed chapters and text in 4 reputed books till date. He is serving on editorial board and review panel of 21 journals. He has attended 36 conferences, 74 CME's & workshops, and has presented 29 papers and delivered 13 guest lecturers till date at national and international levels.

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