

# Mental Foramen in Prediction of Age

TANUJ KANCHAN<sup>1</sup>, KEWAL KRISHAN<sup>2</sup>**Keywords:** Age estimation, Forensic Sciences, Identification, Mandible

Dear Editor,

Mental foramen is one of the two foramina located on the antero-lateral surface of the body of the mandible. It is an important anatomical landmark for the anesthetists and dental surgeons during various oral and maxillofacial procedures/ surgeries. Besides, the anatomical location of the mental foramen it may help in forensic identification especially with regard to determination of age and sex of an individual. We read with interest a recently published article by Bhardwaj et al., on the 'Radiographic evaluation of mandible to predict the gender and age [1]. At the very outset, we congratulate the authors for carrying out this study and the journal for publishing this useful research. We wish to seek certain clarifications from the authors on the aspect of age estimation from mental foramen and provide explanations for a better understanding of the conclusions drawn from research findings in this regard.

The shape of the mandible undergoes definitive variations from birth onwards and up to the old age. The relative position/location of the mental foramen changes accordingly too, thus, providing a clue to the age of an individual. In infancy, the mental foramen is located low and relatively far posteriorly, below the first molar bud. With the eruption of permanent teeth, the mental foramen moves anteriorly, reaching its final destination that corresponds to the level of the second premolar tooth. Thus accounting for its relative antero-posterior movement. With regard to its relative vertical movement, the mental foramen appears closer to the alveolar margin in neonates, and with eruption of teeth it descends between the alveolar and inferior border. In adults, the mental foramen is nearer to the inferior border while it moves upwards closer to the alveolar

border in old age due to the loss of teeth and bone resorption [2,3]. Hence, it is apparent that the variations in the location of mental foramen are observed in the different age groups i.e. neonates and children, young and middle aged individuals and the elderly.

Authors' conclusion that age was less clearly related to mental foramen obviously can be associated to the fact that the study by Bhardwaj et al., [1] was conducted on radiographs of adult individuals aged between 25 and 54 years, and that the extremes of ages were not included in the study. Since statistically significant sex differences were apparent in the location of mental foramen as well as all the other parameters included in the study, it is suggested that the correlation of the age and different parameters is drawn separately among males and females. Similarly the correlation between age and different parameters should be drawn for the total sample and not among different age groups especially when no significant differences were observed between different age groups for most of the parameters included in the study.

In general the article is informative, and authors' effort laudable. The present correspondence is intended to further elaborate on the issues raised in the published research for its better utility in future scientific research and investigations.

## REFERENCES

- [1] Bhardwaj D, Kumar JS, Mohan V. Radiographic evaluation of mandible to predict the gender and age. *J Clin Diagn Res*. 2014;8(10):ZC66-69.
- [2] Gershenson A, Nathan H, Luchansky E. Mental foramen and mental nerve: changes with age. *Acta Anat (Basel)*. 1986;126(1):21-28.
- [3] Lipski M, Tomaszewska IM, Lipska W, Lis GJ, Tomaszewski KA. The mandible and its foramen: anatomy, anthropology, embryology and resulting clinical implications. *Folia Morphol (Warsz)*. 2013;72(4):285-92.

### PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Forensic Medicine, Kasturba Medical College, Mangalore (A Constituent College of Manipal University), India.
2. Senior Assistant Professor, Department of Anthropology, Punjab University, Sector-14, Chandigarh, India.

### NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Tanuj Kanchan,  
Associate Professor, Department of Forensic Medicine, Kasturba Medical College,  
LHH Road, Mangalore – 575 001, Karnataka, India.  
E-mail: tanujkanchan@yahoo.co.in

**FINANCIAL OR OTHER COMPETING INTERESTS:** None.

Date of Submission: **Jan 15, 2015**  
Date of Peer Review: **Apr 22, 2015**  
Date of Acceptance: **Apr 22, 2015**  
Date of Publishing: **Jun 01, 2015**