ANATOMICAL VARIATIONS OF THE HUMAN MENTAL FORAMEN USING DIGITAL PANORAMIC RADIOGRAPHY

Svetlana Jovevska

Faculty of Medical Sciences, University "Goce Delcev" - Stip,

Republic of N. Macedonia

svetlana.jovevska@ugd.edu.mk

Introduction: Mental foramen (MF) is usually the anterior limit of inferior dental canal, which is located in the body of mandible between the inferior and alveolar margins. The great diffusion of the surgical techniquesin jaws surgery and the progress of the radiological imagining procedures expressed many interest in clinical anatomy of MF. The aim of this study was tu determine and compare the position and symmetry of mental foramen in horizontal as well as in vertical plane

Methods and Material : One hundred digital panoramic radiographs were selected and studied regarding the location and symmetry of MF The size of MF was recorded using digital caliper and its appearance was determined by visual examination. The collected data were subjected to statistical analysis using paired Student's t-test.

Results : The commonest position of MF in horizontal plane was in line with the longitudinal axis of the second premolar (31.0%) while in vertical plane it was found to be located inferior to the apex of second premolar (42.2%). The difference in dimensionson the left and right sides were not statistically significant.

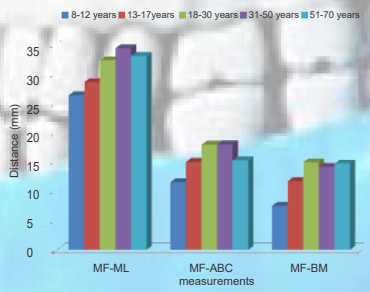

Fig (2) Comparison of mental foramen position measurements in male subjects

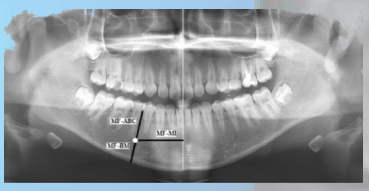

Fig.(1): Panoramic radiograph,MF-ML:distance from mental foramen to the midline, MF-ABC: distance from mental foramen to the alveolar bone crest, MF-BM: distance from mental foramen to the base of mandible

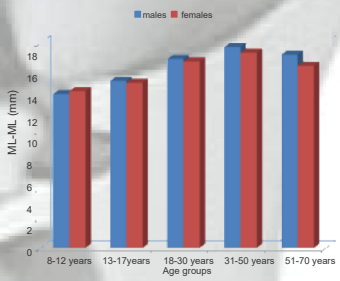

Figure (4) :Comparison of mental foramen-reference measurement between male and female cases

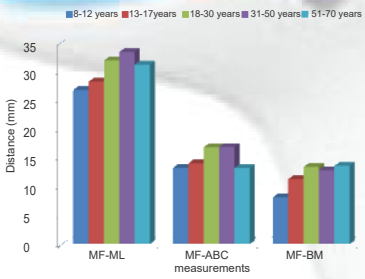

Figure (3) Comparison of mental foramen position measurements in male subjects

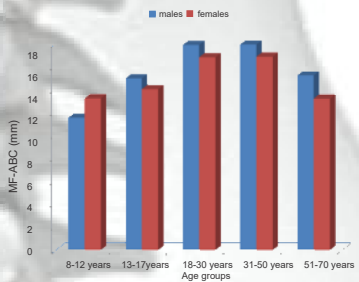

Figure (5): Comparison of mental foramen-alvecolar bone crest (MF-ABC) measurement between male and female cases

Conclusion : MF exists in different locations and possesses many variations. Hence, individual, gender, age, race and assessing technique largely influence these variations. It suggests that the clinicians should carefully identify these anatomical landmarks, by analyzing all influencing factors, prior to their diagnostic or the other dental,surgical and implant operation.