CLINICAL STUDY

Radiographic Recognition of Mental Nerve for Secured Dental Implant Placement by Cone-Beam Computed Tomography in Mosul City Population

Abstract:

The study aims to estimate precisely the different levels of mental loop and foramina in the Mosul population of Nineveh governorate in Iraq. It is a cross-sectional study of a previously saved database in the cone-beam computed tomography device. The study sample was 357 patients selected randomly from the database of patients at the Oral Radiology Unit at the Maxillofacial Department in Al-Salam Teaching Hospital. The study variables are mental foramen (MF) position, shape, radiograph appearance, and mental loop presence and direction. The results show that the age group from 19 to 30 years shows the highest percentage (40.1%). Females show more than half of the cases (59.7%). The MF position's highest percentage is shown in 2 areas with the slight differences. These are the long axis of first premolar and the area between first premolar and second premolar (42.6%, 40.9). According to shape variation round shapes are the uppermost percent (53.8%). More than 60% of cases (66.1%) show continuity with the inferior alveolar canal and 50% show no loop presence, and the mental nerve leaves the foramen in a perpendicular direction. In conclusion localization of the MF, nerve, and its loop precisely in both horizontal and vertical directions, both hard and soft tissues in a continuous view. Before arranging any surgical procedure, anatomic markers are crucial. To reduce the danger of harm to the foramen region, the authors thus advised cone-beam computed tomography before scheduling implant surgery, particularly in the mental region of the jaw.