

عنوان مقاله:

Cone Beam Computed Tomography Study of Root and Canal Morphology of Maxillary first Molar in an Iranian Population

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خلاصه مقاله:

Background: The success of endodontic treatment depends on detection of all root canals so that they could be cleaned, shaped and obturated appropriately. To achieve this, it is essential to know root canals complexities such as the number of canals and types of each root canal, which are genetically determined. Besides, the highest failure rates occur in maxillary first molars. **Objectives:** Therefore, the aim of this study was to investigate the root and canal morphology of maxillary first molars in an Iranian population using cone-beam computed tomography (CBCT). **Materials and Methods:** In this study, images of ۱۵۶ extracted maxillary first molars placed in the waxed blocks were produced using CBCT. Two professional investigators checked images by NNT software in New Tom ۳G system. Axial view and cross section of ۱ mm thickness were used. The number of roots, canals, each roots canal, MB۱ -MB۲ orifice distances and canal types of the Vertucci classification were recorded. Finally, data was analyzed using SPSS۱۶ software. **Results:** We found ۱۰۰% of cases with three separated roots, from which ۶۹.۲۳% had four canals including MB۲ and ۳۰.۷۷% with three canals. ۷۱.۳% of mesiobuccal roots were two canals of type two Vertucci and ۲۸.۷% type ۴ with the mean distance value of ۲.۵۵ ± ۰.۵۷ mm between MB۱ and MB۲ orifice. **Conclusions:** Most extracted maxillary first molars were three rooted and four canals. CBCT has relatively high reproducibility and accuracy of distinguishing MB۲ canal.

کلمات کلیدی:

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