عنوان مقاله:

Evaluation of middle mesial canal prevalence and morphology in mandibular molars in a Turkish population by cone (beam computed tomography (CBCT

محل انتشار:

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خلاصه مقاله:

Objective: This study aimed to assess the prevalence and morphology of the middle mesial (MM) canal in the mandibular first, second, and third molars of a Turkish population using cone beam computed tomography (CBCT).Methods: In this retrospective cross-sectional study, CBCT scans of ۶۳۷ patients were analyzed. Molar teeth with complete root development and without prior root canal treatment were included, counting ۲۱۷۷ mandibular molars. The prevalence of isthmus and MM canal, and the morphology of the MM canals (confluent, independent, or fin-type canals) was determined in different molar groups. Data analysis was performed by the chi-square test, and the intra-observer reliability was assessed using the Kappa coefficient at a significance level of P<۰.۰۵.Results: The overall prevalence of the isthmus and MM canal in mandibular molars was ۵۱.۳۶% and ۸.۳۶%, respectively. The prevalence of isthmus was greatest in second molars (۵۴.۷۸%) and the prevalence of MM canal was highest in first molars (۱۵.۵۸%). A significant association was found between the prevalence of isthmus and MM canal with the type of molar tooth (p<۰.۰۵), but the morphology of the MM canal was not significantly different among the molar groups (P=۰.۴۱). There was no significant relationship between the presence of the MM canal and the age and gender of the participants (P>۰.۰۵).Conclusions: The MM canal is occasionally observed in mandibular molars, predominantly in the first molars, emphasizing the need for accurate diagnosis to reduce post-operative complications. The majority of identified MM canals were of the confluent type.

کلمات کلیدی:

Cone-beam computed tomography, Dental pulp, endodontic treatment, molar, Mandible