A cone beam computed tomography study on the incidence of additional canals of the permanent maxillary and mandibular molars

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Objective: This retrospective study was carried out to assess the impact of gender and side distribution of the incidence of additional canals of the permanent maxillary and mandibular molars using cone beam computed tomography.

Patient & Method: In this clinical study, CBCT images of 160 patients, (90) male and (70) female aged 18-70 years were examined. The number of root canals was investigated according to gender and side. The data were analysed using Pearson's Chi-square test.

Results: The prevalence of the extra four canals of the maxillary first molar male patient for the right side was significantly higher than left side and female patient for both side (P<0.05) while the incidence of three canals was more than four canals of mandibular first molar with significant relationship between female patient right side than left side and male for both side (P<0.05). Both maxillary and mandibular second molars having three canals were more prevalent than two canals and four canals with no gender and side significance.

Conclusion: The frequency of the four root canals in the maxillary first molars was higher than maxillary second molars and mandibular molars assessed by cone beam computed tomography.

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