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## Evaluation of the endodontically-treated distolingual root of the mandibular first molar using cone-beam computed tomography

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The aim of this retrospective study was to evaluate the endodontic treatment of a separate distolingual (DL) root of the mandibular first molar using cone-beam computed tomography (CBCT) images. This study included CBCT images taken from patients at Korean Dental College Hospital. All endodontically-treated mandibular first molars having a separate DL root were investigated. The presence and quality of canal filling and the presence of periapical lesion in distobuccal (DB) and DL root was assessed. The differences in the quality of the root canal filling between the DL root and the DB root were analyzed using Fisher's exact test. Multivariate logistic regression analysis was performed to separately identify factors affecting the presence untreated canal and adequately-filled canal of the DL root. Two hundred and fifteen (215) mandibular first molars which had a separate DL root were found to be treated endodontically. The incidence of an untreated canal in the DL root was 28.8% and only 39.5% of the DL canals had an adequate canal filling. The incidence of untreated canals was significantly higher in the DL root than in the DB root ( $p < 0.001$ ). The right position was significantly associated with the presence of untreated DL canal. Adequately-filled DL canal was also associated with tooth position and was not associated with gender, age or the presence of a periapical lesion. The canal of DL root of the mandibular first molar was more untreated and not adequately filled than the DB canal of that, especially on the right side tooth.

### Biography

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