

ALİ KELEŞ



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Dr. Ali Keleş received his DDS degree in 2001 from Ataturk University and completed his PhD at the same university. He became an assistant professor at İnönü University in 2010 and received an associate professor degree in 2014. He has been an associate professor at Ondokuz Mayıs University since the beginning of 2015. In 2016, he held a position as visiting professor at Loma Linda University in California. Although his fields of interest include biocompatibility, dental anomalies and retreatment, he has focused on microcomputed tomography studies in recent years. Dr. Keleş has had five projects funded by the National Scientific and Technological Research Council of Turkey on microcomputed tomography and has published numerous scientific papers.

MICRO-COMPUTED TOMOGRAPHY IN ENDODONTIC RESEARCH

The success of root canal treatment depends on chemo-mechanical instrumentation, effective disinfection and three-dimensional obturation of the root canal system. Root canal morphology and endodontic procedures share important roles in the success of root canal treatment. Therefore, the complexity of root canal morphology and the efficacy of root canal procedures inside the root canal system have been an object of interest for researches. In the last decade, the use of micro-computed tomography

(micro-CT) technology in revealing root canal anatomy and examining the efficacy of the endodontic procedures has been gaining lots of interest.

Micro-CT is considered the most important and accurate technique to study root canal anatomy. This non-invasive, non-destructive and high-resolution technology allows for three-dimensional visualisation of the root canal system. It can be used to understand how the root canal system affects endodontic procedures. The dataset obtained from micro-CT scanning can be analysed quantitatively and qualitatively, slices can be reconstructed in a selected plane and data can be presented as two-dimensional or three-dimensional images.

This presentation summarises the use of micro CT in the visualisation of root canal morphology and in the investigation of the efficacy of endodontic procedures.