

Abstract

Objectives: the aim of this study was to compare the canal transportation, centering ability and volume of removed dentin of HeroShaper, Endowave, RaCe and hand K-Flexofiles. **Methodology:** forty-eight mesiobuccal canals of mandibular molars were prepared by each system. Cone Beam Computed Tomography was used for evaluation. **Results:** there was no significant difference between instruments in canal transportation and centering ability. The hand K-Flexofile group had statistically the highest volume of removed dentin, there was no significant difference between the rotary groups. **Conclusions:** all systems were able to prepare curved canals with little deviations, the hand K-Flexofile caused significant enlargement of the canals.

Keywords: rotary endodontics, Cone Beam Computed Tomography, transportation, centering ability.