

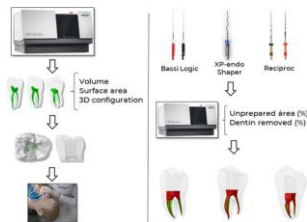


Original article

**The impact of minimally invasive root canal preparation strategies on the ability to shape root canals of mandibular molars**

C. O. Lima, A. F. A. Barbosa, C. M. Ferreira, C. M. Augusto, L. M. Sassone, R. T. Lopes, S. R. Fidel, E. J. N. L. Silva

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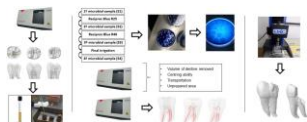
The use of a reduced taper system during root canal preparation resulted in a higher percentage of untouched canal areas when compared to XP-endo Shaper and Reciproc instruments and did not offer advantages regarding the percentage of dentine removed.

Original Scientific Articles

**The influence of endodontic access cavity design on the efficacy of canal instrumentation, microbial reduction, root canal filling and fracture resistance in mandibular molars**

A. F. A. Barbosa, E. J. N. L. Silva, B. P. Coelho, C. M. A. Ferreira, C. O. Lima, L. M. Sassone

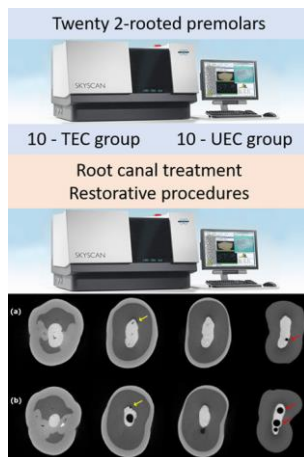
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Minimal endodontic access cavities did not offer any advantages in comparison to the traditional endodontic access cavities regarding microbial reduction in root canals after final irrigation, the efficacy of canal instrumentation, root canal filling and fracture resistance in mandibular molars.

Original articles

**Effect of access cavity design on gaps and void formation in resin composite restorations following root canal treatment on extracted teeth**



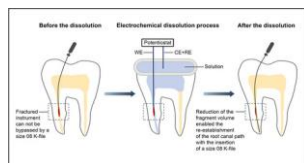
Two-rooted maxillary premolars were scanned in a micro-CT and allocated in two groups according to the design access of the tooth: TEC or UEC. Root canal treatment and restorative procedures were performed and a new micro-CT evaluated the quality of the coronal restoration (gaps and voids). More voids were observed in the UEC group when compared to the TEC. Gap formation did not differ between groups.

Original articles

### **Electrochemical dissolution of nickel-titanium instrument fragments in root canals of extracted human maxillary molars using a small reservoir of electrolyte**

C. C. F. Amaral, F. Ormiga, O. M. O. Araújo, R. T. Lopes, J. A. C. P. Gomes

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The electrochemical dissolution using two electrodes immersed in the solution contained in the acrylic microcell, allowed the recovery of the original canal path with a size 08 K-file. (WE) working electrode in contact with the fragment; (CE + RE) counter-electrode and reference electrode.