

Evaluation of MTA-based endodontic sealer properties

Abstract

The endodontic sealer MTA Fillapex (MTAF) represents the effort of combining a material with excellent biological properties with resins and other components to enhance various properties required for a sealer. The aim of this study was to evaluate qualitatively the working time, fluidity and handling of MTAF; and quantitatively: the flow and radiopacity of MTAF. The Sealer 26 was used for comparative purpose. At the Endodontics Laboratory of Faculdades Integradas do Planalto Central (FACIPLAC), students new to the practice of endodontics used MTAF as root canal sealer in artificial teeth (n=25/group). The students evaluated MTAF regarding the fluidity, working time and handling as: excellent, very good, good, fair or poor. We analyzed the cements flow between glass slides and radiopacity compared to aluminum scale, as well. Statistical analysis: Shapiro-Wilk and post-test t-Student ($p < 0.01$). The students evaluated the Working Time of MTAF as very good and the sealer handling as excellent. Statistical analyzes showed significant differences between the flow of MTAF and Sealer 26 (S26). MTAF presented significant superior flow than S26. In opposite manner, MTAF showed significantly lower radiopacity than S26, but compatible with the ISO for the endodontic sealers. We can conclude from this study that MTAF is a cement with interesting qualities for root canal sealing.

Descriptors: Silicate cement. Root canal. Endodontics.

Salles LP, Abreu MRS, Cornélio ALG. Avaliação das propriedades de um cimento endodôntico a base de MTA. R Odontol Planal Cent. 2015 Jan-Jun;5(1):5-10.