

INFLUENCE OF AH PLUS, MTA FILLAPEX AND SEALAPEX SEALERS ON THE EFFECTIVENESS OF GUTA-PERCHA REMOVAL

Norton Rhenis Mourão Lindhon¹
Alonso Matheus dos Santos Mendonça²
Ana Beatriz da Silva Oliveira³
Alline Soares Vaz⁴
Luciana Carvalho Boggian⁵
Helder Fernandes Oliveira⁶
Orlando Aguirre Guedes⁷

The objective of this study was to evaluate the influence of AH Plus, MTA Fillapex, and Sealapex sealers on the effectiveness of the MTwo-R, ProTaper Universal Retreatment, and Reciproc systems in removing the filling material through cone-beam computed tomography (CBCT). Ninety human single-rooted teeth in standard 15 mm were prepared 1 mm short of the apical foramen to the K-File instrument # 45. The teeth were randomly divided into 3 groups and filled with lateral condensation technique according to the sealer: AH Plus + gutta-percha, MTA Fillapex + gutta-percha, and Sealapex + gutta-percha. After the completion of root fillings were made of CBCT images were acquired with i-CAT Cone Beam 3D unit Imaging System to determine the total area of the shutter in mm². After 8 weeks, the samples were subdivided into 3 subgroups for the realization of the root removal procedure according to the retreatment systems. Thus, the canals were prepared by the K-File instrument # 50. Then new images of CBCT were made to measure the area of residual filling material of root canals, to carry out the calculation in percentage comparing systems with different types of sealer. The difference between the initial and final measurement of the obturator mass allows for analyzing the efficacy of the retreatment system. The results showed greater reduction in the mass obturator Reciproc system, followed by ProTaper and MTwo R2, respectively. There was the presence of residual filling material in different root thirds analyzed, regardless of the type of cement and used system. The analysis showed that the subgroup where it was used AH Plus + MTwo-R2 was what you spent more time to reach the working length and the completion of retreatment, plus this group experienced the highest number of accidents at work. In all groups, there was extrusion of filling material. The type of sealer influenced the endodontic retreatment, with a higher degree of difficulty of root removal procedure AH Plus sealer and MTwo-R2 system.

Keywords: Retreatment, Endodontic Sealers, Niti Instruments.

¹ Student of the Dentistry Course, Evangelical University of Goiás - UniEVANGÉLICA, E-mail: norton_rhenis@hotmail.com

² Student of the Dentistry Course, Evangelical University of Goiás - UniEVANGÉLICA, E-mail: alonsomatheus5@gmail.com

³ Student of the Dentistry Course, Evangelical University of Goiás - UniEVANGÉLICA, E-mail: anabeatrizsilvaoliveira72@gmail.com

⁴ Master's student, Postgraduate Program in Dentistry Evangelical University of Goiás - UniEVANGÉLICA, E-mail: allinesrvaz@outlook.com

⁵ Co-supervisor, Professor of the Undergraduate Dentistry Course Evangelical University of Goiás - UniEVANGÉLICA, E-mail: luciana.boggian@unievangelica.edu.br

⁶ Co-advisor, Professor of the Postgraduate Program in Dentistry Evangelical University of Goiás - UniEVANGÉLICA, E-mail: helfo22@gmail.com

⁷ Advisor, Professor of the Postgraduate Program in Dentistry Evangelical University of Goiás - UniEVANGÉLICA, E-mail: orlandoaguedes@gmail.com