Title: Evaluation of biological debris on reusable endodontic instruments subjected to different cleaning methods prior to sterilization

Abstract

The aim of this study was to evaluate the presence of biological debris on reusable endodontic instruments subjected to different cleaning methods prior to sterilization. Sixty endodontic hand instruments (K-files #15-40 used in 3-4 teeth for cleaning and shaping) were analysed and were divided into 3 groups on the basis of decontamination protocols used. Twenty new K-files were used as controls. The evaluation of the effectiveness of the cleaning methods used was based on the amount of residual debris detected by immersion of instruments in Van Gieson's solution for 3 minutes. The samples were then rinsed in distilled water and dried on endodontic stand and analyzed by light microscopy. Residual biological debris was observed on 93% of all the samples taken. The mean value of Maximum Biologic Contamination (MBC) was 20% for the group where instruments were brushed manually and immersed in alcohol, 15% in the group in which commercially available disinfectant were used and 11% for the group where instruments were ultrasonically cleaned. There was statistically significant difference between the cleaning protocols applied ($P< 0.001$). The methods used to clean endodontic instruments appear to be generally ineffective for the removal of biological debris. The best method was the one that included mechanical, chemical and ultrasonic cleaning of the instruments. (Word count- 209)

Biography

Dr. Poorva Khullar is an established Endodontist who completed her masters in Endodontics from Jaipur, India. She then worked with Clove Dental, Delhi for 3 years. She has also worked as a Junior Resident in Sir Ganga Ram Hospital, Delhi for one year. She has done a couple of interesting cases and was always inclined towards research related to Endodontics. She also undertook a few studies apart from her thesis work while doing her masters, all of which are now published in recognized journals. With her established interest in academics and research related subjects, she is always looking for avenues to expand in this horizon.

Presenting author details
Full name: Poorva Khullar
Contact number: +16043780902
Twitter account: @KhullarPoorva
Linked In account: poorva khullar

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