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

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The purpose of the study is to determine the existence 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 effectiveness of the cleaning methods was evaluated 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 analysed 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 ineffective in 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.