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## Dental Medicine

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## Title: Evaluation of the efficacy of ultrasonically activated SmearClear, 17% EDTA and One step irrigating solution in removal of smear layer – An *In Vitro* SEM Study

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The success of endodontic therapy relies on proper biomechanical preparation, disinfection and three dimensional obturation of the root canal system. During cleaning and shaping of the root canal system, mechanical instrumentation leaves a smear layer covering the dentinal walls which may be infected and may protect the bacteria within tubules, hinder penetration of disinfectants and sealants into dentinal tubules and has the potential of compromising the seal of the root canal filling. The purpose of this study was to compare the efficacy of SmearClear (Sybron Endo, Orange CA), 17% EDTA, one step irrigation solution using ultrasonic activation in removing smear layer from root canal walls. Thirty extracted single rooted human teeth were randomly divided into three groups (n=10) and instrumented using Protaper Next Nickel Titanium rotary instruments. Each canal was subsequently irrigated with either of the solutions which were ultrasonically activated. The samples were prepared and examined under scanning electron microscopy for the opening of dentinal tubules in the coronal, middle and apical thirds.

## **Biography**

Dr. Pallavi Goel has completed her BDS at the age of 22 years from Kurukshetra University and is pursuing post graduate studies from Pt. B. D. Sharma University of Health Sciences Rohtak in the department of Conservative Dentistry and Endodontics. She has won bronze medal in poster presentation at the 30th IACDE and 23<sup>rd</sup> IES National Conference held at Amritsar.

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