

Evaluation of the efficacy of Protaper, HERO SHAPER GOLD, ProTaper Universal retreatment, and R-Endo, for removing gutta-percha and AH plus sealer from root canals.

(Evaluación de la eficacia de Protaper, HERO SHAPER GOLD, retratamiento ProTaper Universal y R-Endo, para eliminar gutapercha y sellador AH plus de los conductos radiculares.)

Upendranatha Reddy N ¹, Gopi Krishna Reddy M ¹, Sujayeendranatha Reddy ¹E, Anusha Y ¹✉, Nagalakshmi Reddy S ¹, Datta Sai Kiran K ¹

¹ G Pulla Reddy Dental College And Hospital, Kurnool, India

Avan Biomed. 2025; 14(1): 80-91

Supplementary material



Figure S1. S1a and S1b. Extracted Maxillary Anterior teeth used in the study. S1c. Decoronated Teeth Samples. S1d. Armamentarium used in the study. S1e. Materials used in the study. S1f. E & Q Plus (Meta Biomed). S1g and S1h. X ray Machine and Developer, Fixer solutions. S1i. Radiographs of Obturated study samples in MD and BL direction. S1j. Dental Operating Microscope (Labomed). S1k. Operating on Dental Operating Microscope



Figure S2. Rotary NiTi files used in Retreatment. S2a. Protaper files (DentsplyMaillefer). **S2b.** HERO SHAPER GOLDfiles (Shanghai Carejoy Medical Co., Ltd.). **S2c** and **S2e.** HERO SHAPER GOLDfiles, (Shanghai Carejoy Medical Co., Ltd.) **S2e.** Protaper Universal **S2f** R- Endo files Retreatment files (Micro Mega) (Dentsply Maillefer) **S2g.** Satelec, P5 Newtron XS, Piezoelectronic unit. **S2h.** Irrisafe file (Satelec). **S2i.** Materials used for decalcification of specimens. **S2j.** Nitric Acid Decalcification. **S2k.** Stereomicroscope (Lynx, Lawrence & Mayo) and **S2l** Digital Camera (Nikon)

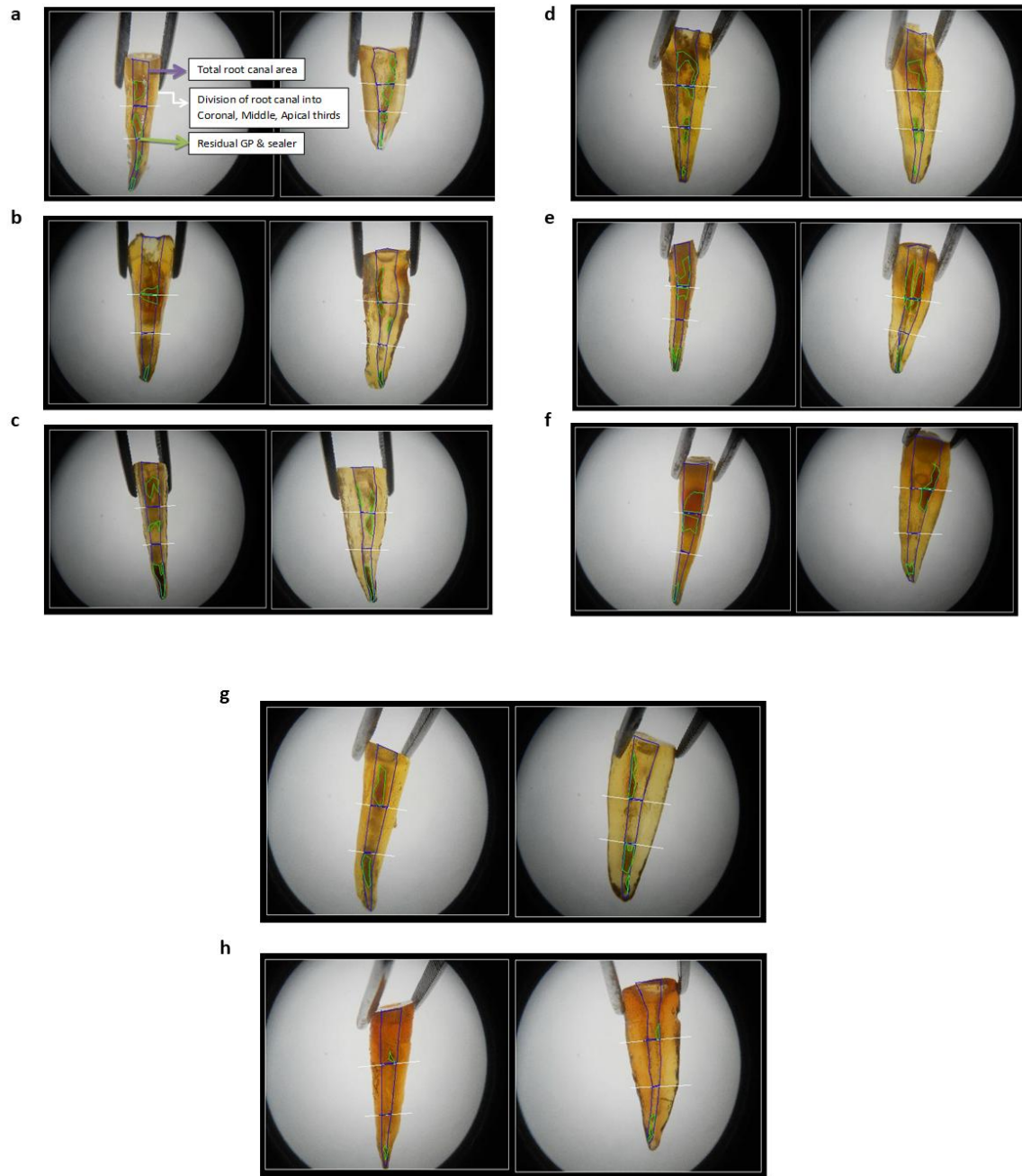


Figure S3. AutoCAD analysis of transparent tooth specimens. S3a. Sub Group I A. S3b. Sub Group I B. S3c Sub Group I B S3d. Group II B. S3e. Sub Group III A. S3f Sub Group III B. S3g. Sub Group IV A. S3h. Sub Group IV B