

題名:醫療機構推行ISO 9000實證

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摘要:BACKGROUND AND OBJECTIVES: Limited information exists regarding the efficacy of laser activated irrigation (LAI) on removal of root canal debris. This study compares the efficacy of LAI for removal of debris in root canals as compared to conventional irrigation (CI) and passive ultrasonic irrigation (PUI). MATERIALS AND METHODS: A splitted tooth model was constructed with straight roots prepared to a 0.06 taper and an apical diameter of ISO 40. A vertical groove was cut in the canal wall at 2-6 mm to the end of the canal in one halve of the root canal wall and filled with dentinal debris. In group 1 root canals were irrigated with 2.5% NaOCl by hand (20 seconds) with the needle 1 mm short from the apical stop, in group 2 NaOCl was ultrasonically activated (20 seconds) with an Irrisafe tip 1 mm short from the apical stop, and in group 3 NaOCl was activated with an Er,Cr:YSGG laser (Z2 Endolase tip -200 microm fiber, four times for 5 seconds, 75 mJ, 20 Hz, stationary at 5 mm from the apical stop). The remaining quantity of dentin debris in the groove was evaluated using a scoring system. RESULTS: LAI resulted in significantly less debris than PUI ($P<0.005$) and CI ($P<0.0005$). PUI also showed significantly less debris than CI ($P<0.005$). CONCLUSION: Under the conditions of this study LAI is statistically significantly more effective in removing artificially placed dentin debris in a root canal as PUI and CI.