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Coronal Leakage Inhibition in Endodontically Treated Teeth Using Resin-coating Technique

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Abstract:
The purpose of this study was to evaluate coronal leakage inhibition using a resin-coating technique after endodontic treatment. Thirty-six human incisors were cut at the cementoenamel junction, and endodontic obturations were performed. The specimens were randomly divided into three groups according to post space preparation (10 mm depth) , resin coating, and temporization. For the resin coating, the dentin surface was coated with either a combination of Clearfil SE Bond and Protect Liner F (SE/ PLF) or RZII (RZ). Then, the specimens were stored in 37°C distilled water for 24 hours and placed in 1% methylene blue solution for 48 hours. After which, the specimens were sectioned faciolingually along the root canal and the length of dye penetration was measured from the cementoenamel junction. Three-way ANOVA revealed that the dye penetration scores were influenced by post space preparation, resin coating, and temporization. Resin coating

with RZ significantly reduced the dye penetration score and SE/ PLF completely eliminated dye penetration.

Key words:
Resin coating, Coronal leakage, Endodontically-treated teeth

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