

TECHNICAL UPDATE

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Influence Of Two Desensitizer Agents On The Micro-Leakage Of Adhesively Luted Ceramic Inlays

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2011;5:77-83

Objectives: The purpose of this study was to evaluate the effects of two different desensitizers (Hemaseal & Cide and Aqua Prep F) on the micro-leakage of ceramic inlay restorations luted with adhesive resin cement.

Methods: Cylindrical Class V cavities were prepared on the buccal surfaces of thirty extracted human third molars. One of the desensitizers (either Hemaseal & Cide, Advantage Dental Products Inc. or Aqua-Prep F, Bisco) was applied to the cavities. Ten samples were used as controls. Ceramic inlays were fabricated using the heat-pressed glass ceramic technique (IPS Empress II). Inlay restorations were luted using adhesive cement (Variolink II, Ivoclar-Vivadent). The restorations were properly finished, stored in distilled water at 37°C for 24 h and subjected to 1000 thermal cycles. The micro-leakage scores were examined using a stereomicroscope at the 30x magnification after each sample was stained with 0.5% basic fuchsin. The data were analyzed using Kruskal Wallis and Mann Whitney U tests ($P=0.05$).

Results: Aqua-Prep F samples showed significantly higher micro-leakage scores at the enamel margins than did the Hemaseal & Cide and control groups ($P<0.05$). Hemaseal & Cide application led to less micro-leakage than the other groups both at the enamel and dentin margins ($P<0.05$).

Conclusions: Hemaseal & Cide desensitizer decreased the micro-leakage process at the enamel and dentin margins of inlay restorations luted with adhesive luting cement, while Aqua-Prep F increased the leakage scores at the enamel margins.



No. 3