0503 Effect of NaOCl treatment on six-month dentin bond strength

P.C.V. YAMAZAKI1, A.K.B. BEDRAN DE CASTRO2, and P.N.R. PEREIRA1, 1 University of North Carolina, Chapel Hill, USA, 2 University of North Carolina at Chapel Hill, USA

Objective: The purpose of this study was to evaluate the effect of NaOCl treatment and neutralization technique on 6-month dentin bond strengths (µTBS). Methods: Bovine incisors were prepared with 600-grit SiC paper to expose dentin. Teeth were acid etched with 35% phosphoric acid and randomly assigned to 2 treatments: application of 5% sodium hypochlorite (NaOCl) for 2 minutes, followed or not by application of 10% sodium ascorbate (SA) for 2 minutes. Phosphoric acid followed by application of the primer/adhesive only was the control (no treatment). Two adhesives systems were used: One Step (Bisco) and Single Bond (3M-ESPE). Adhesives were applied following manufacturer's instructions and a crown was then built to a height of 3-5 mm using Z250 resin composite (3M-ESPE). Specimens were randomly stored in distilled water for 24 hours, 1, 3, and 6 months at 37°C. After storage, the teeth were sectioned into 1.0 X 1.0 X 5.0 mm beams and loaded to failure at a crosshead speed of 1 mm/min. Results: All data were statistically analyzed by three-way and one-way ANOVA and Fisher's PLSD test (p<0.05).

Conclusion: Bond strengths of deproteinized dentin significantly decreased over time for both adhesives. This study was supported by Bisco.

Same superscripts represent no statistical significant difference (p>0.05).

Seq #82 - Caries-affected Dentin, Primers
2:00 PM-4:00 PM, Thursday, 10 March 2005 Baltimore Convention Center Exhibit Hall E-F