

by the halogen LCU and the LED(Std) LCU. The effectiveness of cure of soft-start regimen in LED LCUs(Elipar Freelight [redacted] mode) was found in the degree of conversion obtained from the FTIR study. However, further mechanical tests and [redacted] are required to judge the LED LCU fully.

Microshearbond strength to different surfaces of dentin under simulated pulpal pressure

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I. Objectives

The purpose of this in vitro study was to measure and compare the in vitro micro shear bond strengths of the following dentin bonding systems to different dentin surfaces under simulated pulpal pressure.

II. Materials and Methods

Occlusal surfaces of 180 extracted human molars were prepared to expose the dentin surface in perpendicular to axis of tooth. Teeth were randomly assigned to 3 equal groups and subdivided into 4 equal groups. 4 adhesive systems(All Bond 2, SEbond, AdheSE, Prompt L-Pop) were used in this study. The dentin surfaces were treated with the bonding systems mentioned above, and resin composite cylinders were built up under simulated pulpal pressure when saline(Group II) or diluted bovine serum(Group III) was used as the pulpal fluid. As a control, the same procedures were done in the dried dentin surfaces(Group I). After one day of storage in water, micro shear bond strengths were measured using EZ tester (shimadzu, Japan). The data were statistically analyzed using two way ANOVA for the effect interrelation between different dentin conditions and materials. Within the experimental group, Kruskal-Wallis one way ANOVA and Student-Newman-Keuls method were used for the effect of dentin condition in subdivide groups on microshear bond strength.

III. Results

Group I showed significant higher microshear bond strength than Group II and III statistically($P < 0.05$). SEbond and AdheSE showed no difference among the different dentin condition. In Prompt L-Pop, Group I, III showed higher microshear bond strength than Group II.

IV. Conclusions

Dried dentin surface showed higher micro-shear bond strengths than the dentin surfaces which simulated pulpal pressure using saline or diluted bovine serum.