G-BOND and Gradia Direct

546 Clinical Evaluation of a Self-Etching Adhesive System

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Simplified adhesive systems are growing in clinical use.

Objectives: The purpose of this longitudinal clinical trial was to evaluate a self-etching adhesive in Class V cavities.

Methods: 54 non-carious erosion/abfraction lesions in 26 patients were restored. Gradia Direct composite resin was placed using a self-etching adhesive, G-Bond following ADA guidelines mandating no cavity preparation. After cleaning the tooth surface with pumice, the adhesive system was placed. The G-Light was used for polymerization of the adhesive and the composite resin. The following parameters were evaluated at 6 months (n=54) and 18 months (n=50) using modified Ryge criteria: Color Change (CC), Recurrent Decay (RD), Marginal Discoloration (MD) Marginal Integrity (MI). Tooth sensitivity (S) and retention (R) were also documented. Data was analyzed with Chi Square.

Results: (A=alfa, B=bravo, C=charlie, D=delta)

	Six-months	**18 Months**
CC	100% A	100% A
RD	100 % A	100% A
MD	94.4 % A, 5.6% B	98.0 % A, 2.0 % B
MI	90.7 % A, 9.3 % B	90 % A, 10% B
S	100% A	100 % A
R	100% A	98 % A 2% D

38.2 % of patients reported preoperative sensitivity to tactile or air stimulation. No patient exhibited sensitivity at either the six-month or 18 month recall. There were significant differences in marginal integrity and marginal discoloration after 18 months ($p>0.05$). Minimal marginal changes were observed and 1 restoration was lost to retention failure.

Conclusions: The adhesive system and composite resin performed well after 18 months of clinical service in Class V cavities. Some minimal changes in marginal stain and integrity were observed.

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