

Clinical Evaluation of a Self-Etching Adhesive (1/04)

Clinical evaluation of a self-etching and a one-bottle adhesive system at two years. Turkun SL. J Dent 2003;31:527-534.



The purpose of this study was to evaluate the clinical performance of a two-step self-etch adhesive (Clearfil SE Bond, Kuraray, New York, NY) and a two-step etch&rins adhesive (Prime&Bond NT, Dentsply, Milford, DE) in non-carious Class V restorations at two years. Ninety-eight composite resin restorations were placed by one operator in 32 patients. Clearfil AP-X (Kuraray, New York, NY) hybrid composite resin was used with Clearfil SE Bond and Spectrum TPH hybrid composite resin (Dentsply, Milford, DE) was place with Prime&Bond NT. The restorations were evaluated according to the modified Ryge criteria at baseline, 6, 12 and 24 months. At two years, 88 restorations were reviewed and recurrent caries, anatomic form, and post-operative sensitivity were rated favorably (100% alpha) for all restorations. Only a few cases from both adhesive systems showed marginal discoloration. The retention rates were not significantly different with 93% of the Clearfil SE Bond and 91% of the Prime&Bond NT restorations retained. The authors concluded that both adhesive systems exhibited very good clinical performance at the end of two years.

DIS Comment: Recently, multiple self-etching adhesive systems have been introduced to the dental profession. Clinical studies are necessary to evaluate their performance over time. Adhesives have mainly been tested clinically in non-prepared cervical abrasions and erosions because these lesions are common and are located primarily in dentin. Laboratory studies have shown a definite overall downward trend in bond strengths with self-etching systems, especially with the one-step version.¹ A notable exception, however, is Clearfil SE, a two-step self-etching adhesive which has provided excellent bond strengths in the laboratory and has now been shown to be successful clinically in class V lesions.^{1,2} In general, DIS recommends caution with any new adhesive agent until well-controlled, longer-term clinical studies become available.

References

1. Van Meerbeek B, De Munck J, Yoshida Y, Inoue S, Vargus M, Vijay P, Van Landuyt K, Lambrechts P, Vanherle G. Adhesion to enamel and dentin: current status and future challenges. Oper Dent 2003;28:215-235.
2. Peumans M, Van Meerbeek B, De Munck J, Lambrechts P. Two-year clinical effectiveness of a self-etch adhesive in cervical lesions. J Dent Res 2003;82:abstr #0911.