COMMENTARY

EFFECT OF PRERESTORATIVE HOME-BLEACHING ON MICROLEAKAGE OF SELF-ETCH ADHESIVES

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The in vitro study by Yazici and colleagues examined the effect of prerestorative home-bleaching on microleakage of various adhesive systems. The authors used a low concentration of home-bleaching agent and one total-etch system, two two-step self-etch systems, and two one-step self-etching adhesive systems in a traditional microleakage study design. The results indicate differences in the degree of microleakage between the various adhesive systems used in the study.

In a study such as this, it is not uncommon to see differences in the degree of microleakage not only between groups but also within the groups themselves. From a clinical perspective, we need to ask what information can be gained from this particular study. First, a relatively low concentration (10%) of carbamide peroxide was examined. What differences, if any, would be observed with higher concentrations of home-bleaching agents or even in-office bleaching agents that tend to be more common in today's clinical practice? Would the same trend that appeared in these results still be evident, or would a greater degree of microleakage, no matter the type of adhesive system, be the result? Second, with faulty margins being one of the primary reasons for restoration replacement, what effect does pre-restorative bleaching have on restoration longevity and reasons for replacement? Would restorations placed post-bleaching develop faulty margins sooner, be more susceptible to secondary caries or have a shorter longevity than similar non-bleached restorations?

Overall, this study was well designed and provides some useful insight into possible consequences of prerestorative home-bleaching from a clinical perspective. As clinicians, we need to monitor trends in our everyday practice in regard to these procedures. Future research and case reports may also shed additional light on this subject.

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