

3014 Marginal Seal in Mod Restorations Using Low Elastic Modulus Liners [V. SETIEN](#)¹, R. RAMIREZ¹, and K. BIGOTT²,

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Low elastic modulus liners (LEML), such as resin-modified polyalkenoates (RMP) and flowable composites (FC) under resin-based composites (RBC) restorations, absorb polymerization stress, which may decrease cusps flexure and microleakage through a gingival wall gap. Objectives: to determine to what degree cusps flexion and gingival microleakage decrease when LEML are used in deep MOD. Methods: 20 MOD cavities were made in bicuspid; they were randomly divided in three groups. Group I, bulk (n=6) Singlebond and TPH were used to restore the cavities with an incremental technique. Group II, flowable (n=7), Tetric Flow was used in a thin layer prior to TPH. Group III, polyalkenoate (n=7), Fuji II LC was used in the proximal boxes before restoring with TPH. Inter-cuspal length was measure before and after placing restorations. Samples were thermocycled 600 times before being submerged in 50% silver nitrate solution during two hours. The silver nitrate was then fixed with a Kodak fixer solution and samples were transversally sectioned. The depth of the silver nitrate penetration was measured in both proximal boxes of each specimen. Results: Groups mean cusps closure was as follows: I= 115, II= 120 and III= 127 microns (p= 0.982). Microleakage was statistically significant different (p=0.002) being (I = II) > III. Conclusion: Under the conditions of this study LEML could not avoid cuspal flexion; the use of RMP decreased gingival microleakage when no enamel was present.

[Seq #330 - Microleakage of Composites II](#)

2:00 PM-4:00 PM, Saturday, 12 March 2005 Baltimore Convention Center Exhibit Hall E-F

[Back to the Dental Materials: II - Adhesion-Other Program](#)

[Back to the IADR/AADR/CADR 83rd General Session \(March 9-12, 2005\)](#)

[Top Level Search](#)