PRINT: ISSN 0975-1270 ONLINE: ISSN 2456-6306
JOURNAL OF
LIFE SCIENCES

J Life Science, 3(1): 29-33 (2011)
PRINT: ISSN 0975-1270 ONLINE: ISSN 2456-6306
DOI: 10.31901/24566306.2011/03.01.05

Evaluation of Microleakage of Various Restorative Materials: An *in Vitro* Study

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KEYWORDS Microleakage. Glass Ionomer Cements. Composites. Compomer

ABSTRACT Microleakage is the clinically detectable passage of bacteria, fluids, molecules or ions between a cavity wall and the restorative materials applied to it. The aim of this study was to evaluate and compare the microleakage of six restorative materials viz., GC Fuji II LC, Ketac Molar Easy Mix, Filtek Z350, Filtek P60, Durafill VS and Dyract Restorative. Sixty caries-free premolars were divided into six groups (n = 10) and standard Class I cavities were restored with six different materials. Observation for marginal leakage was done under Stereomicroscope at 10X and data collected was subjected to statistical analysis. Concluding from the study, the sealing ability in terms of microleakage can be summarized as: Self-cured GIC (Ketac Molar Easy Mix) < Compomer (Dyract) < Packable composite (Filtek P60) < Resin modified Glass ionomer cement (GC Fuji II LC) d" Microfilled composite (Durafill VS) < Nanocomposite (Filtek Z350).