

Effect of heat application on the marginal leakage of newly developed glass hybrid restorative system

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Aim: The aim of this study was to evaluate the effect of heat application on the marginal leakage of newly developed glass hybrid restorative system.

Materials & Methods: Standard class V adhesive cavities were prepared on the buccal and lingual surfaces of eighty human molar teeth at the cemento-enamel junction and randomly divided into 8 groups (n=10). The cavities were restored using Bulk Fill, Fluoride Releasing, Glass Hybrid Restorative System (Equia Fill, (GC, America) and Equia forte, (GC, America)) according to manufacturer recommendations. Application of heat by means of a LED curing unit for 20 seconds and 60 seconds were done. Restorations were polished with aluminum oxide polishing disks (Sof-Lex, 3M ESPE Dental Products, St. Paul, MN, USA). Only four groups had been aged by thermo cycling and loading. All specimens were then stained with 0.5% aqueous basic fuchsine dye and sectioned bucco-lingually. Dye penetration was then scored. Statistically analysis was conducted by using Pearson's chi-square test and Kruskal-Wallis tests.

Results: There were no statistically significant differences found between the groups ($p>0.05$).

Conclusions: From this study, it can be concluded that the application of heat has no negative effect on the marginal leakage of newly developed glass hybrid restorative system.

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