

Clinical Evaluation of Posterior Resin Composite and Glass Ionomer Cement Restorations in Primary Teeth: 18-Month Results

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Abstract

Background and Aim: Recently, within the efforts to improve the properties of glass ionomer cement as a restorative material in dentistry the EQUIA glass ionomer cements is introduced. The purpose of this study is to perform a clinical evaluation of (Japanese) (EQUIA Fill, GC) glass ionomer cement with (Americans) 3M Filtek P60 posterior composites during the follow-up period of 6, 12 and 18 months.

Materials and Methods: In this clinical trial study, 50 children aged 4 to 9 years with small to medium caries lesions on the occlusal surfaces of the mandibular second primary molars were enrolled and randomly their teeth restored with 3M Filtek P60 posterior composite and GI EQUIA . Then, during 6, 12 and 18 months, clinical assessment was done on each restored tooth and according to the USPHS criteria, the marginal integration, color match, marginal discoloration, anatomic form and secondary caries were recorded. Data were analyzed through Wilcoxon and Friedman non-parametric statistical tests.

Result: At the end of an 18-month follow-up period, the difference between the effect of both restorative materials on color matching, ($P=0.317$) marginal adaptation, ($P=0.414$) anatomic form ($P=0.317$), marginal discoloration, ($P=0.564$) and secondary caries was not statistically significant. Clinical success rates were similar and acceptable in both restorative materials in different periods. But difference in loss of marginal adaptation was significant after 12 months. ($P<0.001$)

Conclusion: The use of 3M Filtek P60 posterior composite and EQUIA glass ionomer cements to restore the primary molars of children is clinically successful.

Keywords: *Deciduous Teeth, Filtek P60 Composite, Site Resins.*