

21ST ANNUAL WORLD DENTAL SUMMIT

February 26-28, 2018 | Paris, France

The effect of two nanofilled resin-based coatings on color stability of five glass ionomer restoratives immersed in three different food simulating solutions**Dana Jafarpur and Rafat Bagheri**

Shiraz University of Medical Sciences, Iran

Objective: To evaluate the effect of different nanofilled resin coatings on the staining susceptibility of glass ionomer restoratives after immersion in three food simulating solutions (FSS).

Method: Five encapsulated glass-ionomer restoratives (Riva light-cure (SDI), Riva self-cure (SDI), Fuji II LC (GC), Fuji Bulk (GC) and Equia Forte Fil (GC)) and two nanofilled coatings (EQUIA Coat (GC) and G-Coat plus (GC)) were employed. All specimens were immersed in distilled water for 24 hours and then subjected to a color measurement with a spectrophotometer. Then the samples were divided into three subgroups and immersed for another one week in lactic acid (0.1 mol/L), coffee, and distilled water (control), respectively. The differences in the lightness and chromaticity values (ΔL , Δa , Δb) were determined and the total color change (ΔE) was calculated using the formula: $\Delta E_n = [(\Delta L_n)^2 + (\Delta a_n)^2 + (\Delta b_n)^2]^{1/2}$.

Result: Three-Way ANOVA showed a significant interaction effect between materials, coatings and solutions for the color change values. Therefore, one-way ANOVA was used to compare different variables between the materials. Color change values (ΔE) varied depending on the material and solution. G-Coat Plus exhibited lower color change values compared to the EQUIA-coated and the uncoated groups. The effect of immersion in FSS on color change values among materials varied depending on the type of coating.

Conclusion: Within the limitations of this study, the results suggest that in terms of color stability, G-COAT Plus is recommended to be applied on tested GICs as they reduce staining susceptibility.

Biography

Dana Jafarpur is pursuing her graduation from the Shiraz University of Medical Sciences, Iran. She has written a book in forensic dentistry and published 5 papers during her undergraduate studies.

djafarpur@yahoo.com

Notes: