A Comparative Evaluation of Six Prophylaxis Pastes, Cups, and Brushes on the Gloss of Three Restorative Materials

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Abstract:

Purpose: To compare the effect of different combination of prophylaxis-polishing pastes and cups/brushes on the surface gloss of three restorative materials (Filtek Z350, Tetric N-Ceram, and Ionofil Plus AC).

Methods: Ninety disk-shaped specimens were prepared from each material, thermocycled, and randomly allocated into nine groups with 10 specimens each. Specimens were measured at baseline for gloss. Then, prophylaxis polishing pastes and cups/brushes were used, according to the instructions of the manufacturers. The second time measurements for gloss were completed.

Results: The mean change of gloss among the three materials was statistically significant ($P<0.0001$). The two-way interaction terms “material and brush,” “material and paste,” and “brush and paste” indicated a statistically significant difference in mean change of gloss ($P<0.0001$, $P<0.0001$, and $P<0.0001$, respectively). The three-way interaction terms “material and brush and paste” showed a statistically significant difference in mean change of gloss ($P<0.0001$).

Conclusions: The maximum change in mean gloss was recorded for Filtek Z350 XT, nylon brush, and Spectra paste followed by Filtek Z350 XT, nylon brush, Qartz paste, and Filtek Z350 XT, nylon brush, and Nupro paste. The change in gloss from pretreatment to posttreatment was significant across the three materials, the three brushes, and the three pastes.