0918 Evaluation of Tooth Sensitivity and Gingival Irritation during Tooth Whitening

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Objective: The objective of this double-blind in vivo Nightguard Vital Bleaching study was to compare tooth sensitivity (TS) and gingival irritation (GI) resulting from treatment with experimental 5% and 7% hydrogen peroxide (HP) tooth-whitening products to those of a commercially-available 10% carbamide peroxide (CP) product (Platinum Daytime). Methods: Forty-three subjects participated in the study each receiving a scalloped maxillary treatment tray (0.035”) without reservoirs. Treatment products were assigned using a blocked randomized design. Participants (13 each in the 5% and 7% HP groups and 17 in the 10% CP group) wore their trays with the appropriate treatment product 30 minutes twice a day for 7 days (representing exaggerated usage for the 5% and 7% products). Participants were seen pre-treatment, at the end of 7 treatment days, and at one week post-treatment during which they used neither trays nor whitening products. Participants completed a daily log-form to record their perceptions of TS/GI as well as questionnaires at pre-treatment, the end-of-treatment and 7 days post-treatment.

Results: Data from the end-of-treatment questionnaire revealed no statistical differences (p>0.05) in TS and GI levels among the 3 products, although the 7% product group was directionally higher than the Platinum Daytime control group. There was no statistical difference (p>0.05) in TS and GI among the 3 products at 7 days post-treatment. Data from the daily log-forms revealed no statistical difference (p>0.05) in the number of days of TS/GI experienced during treatment among the 3 products. Any TS/GI above pre-treatment levels reported at the end-of-treatment resolved in an average of 2-3 days for all 3 products. Conclusions: Patients did not report any statistical differences in TS/GI between the 10% CP, 5% HP and 7% HP products. After ending treatment, any remaining TS/GI resolved in 2-3 days. Supported in part by Colgate-Palmolive Inc.

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