

Clinical efficacy of Colgate® Sensitive Pro-Relief™ desensitizing paste in pre-procedural relief of dentin hypersensitivity

Hamlin D, Phelan Williams K, Delgado E, Zhang YP, DeVizio W, Mateo LR (2009)

Clinical evaluation of the efficacy of a desensitizing paste containing 8% Arginine and calcium carbonate for the in-office relief of hypersensitivity associated with dental prophylaxis

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Study objectives:

The objective of the study was to compare the efficacy in reducing dentin hypersensitivity of two in-office pastes when applied as a pre-procedure to a professional dental cleaning.

Trial conditions and methods

Products under investigation

Test: Colgate® Sensitive Pro-Relief™ desensitizing paste (Colgate-Palmolive Company, New York, NY) containing 8% arginine in a calcium carbonate/silica base.

Control: Nupro pumice-based fluoride free prophylaxis paste (Dentsply, York, PA).

Study subjects

A total of 45 male and female subjects (aged between 23 and 66 years) with established dentin hypersensitivity (two hypersensitive teeth with a tactile sensitivity score [Yeaple probe] of 10-50 grams of force and an air blast score of 2 or 3 on the Schiff Cold Air Sensitivity Scale).

Methods

In this double-blind, parallel group study, 45 subjects with established dentin hypersensitivity were randomly assigned to either the test (n=22) or control (n=23) group. Following baseline evaluation of dentin hypersensitivity, the assigned in-office paste was applied as a pre-procedural step prior to professional cleaning. Immediately after completion of the cleaning procedure, subjects were re-evaluated for tactile and air blast sensitivity scores. Statistical analyses were performed separately for tactile and air blast scores. Within treatment comparisons were performed using a T-test. Comparisons between

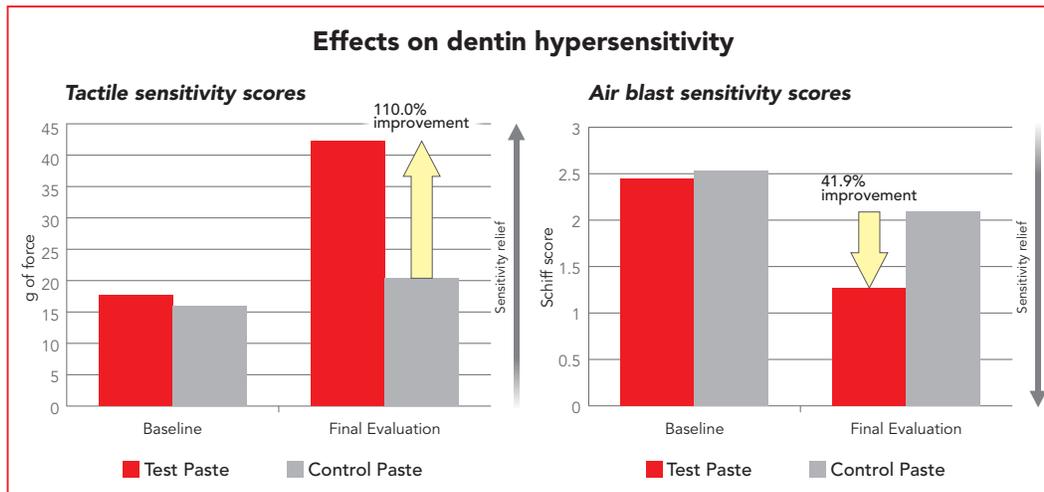
treatments using baseline adjusted scores were performed using analysis of covariance (ANCOVA).

Results and Conclusion

Results

Immediately after the cleaning procedure, subjects assigned to the test product demonstrated statistically significant improvements from baseline in tactile (132.1%) and air blast (48.6%) sensitivity scores. At the same time point, subjects assigned to the control product demonstrated statistically significant improvements from baseline in air blast (13.9%) sensitivity score. The improvement from baseline in tactile sensitivity score (21.7%) in the control subjects was not statistically significant.

Immediately after the cleaning procedure, the test product group demonstrated statistically significant improvements compared to the control group in tactile (110.0%) and air blast (41.9%) sensitivity scores.



Conclusion

When applied prior to a professional dental cleaning, Colgate® Sensitive Pro-Relief™ desensitizing paste with 8% arginine and calcium carbonate provides a statistically significant reduction in dentin hypersensitivity measured immediately following the dental cleaning as compared to a control prophylaxis paste.