

A Clinical Investigation of Colgate Total with Dual Zinc Plus Arginine in Controlling Supragingival Calculus Formation Over a 12-Week Period

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Internal Report

Study objectives

The objective of this 6-month clinical study was to evaluate the clinical efficacy of Colgate Total with Dual Zinc plus Arginine as compared to regular fluoride toothpaste in controlling supragingival calculus formation over a 12-week period.

Trial conditions and methods

Products under investigation

Test dentifrice: zinc (zinc oxide, zinc citrate) 0.96%, 1.5% Arginine and 1450 ppm fluoride (Colgate Total; Colgate-Palmolive Company, New York, NY)

Control dentifrice : regular fluoride dentifrice containing 1450 ppm fluoride (MaxFresh Tea; Colgate-Palmolive Company, New York, NY)

Methods

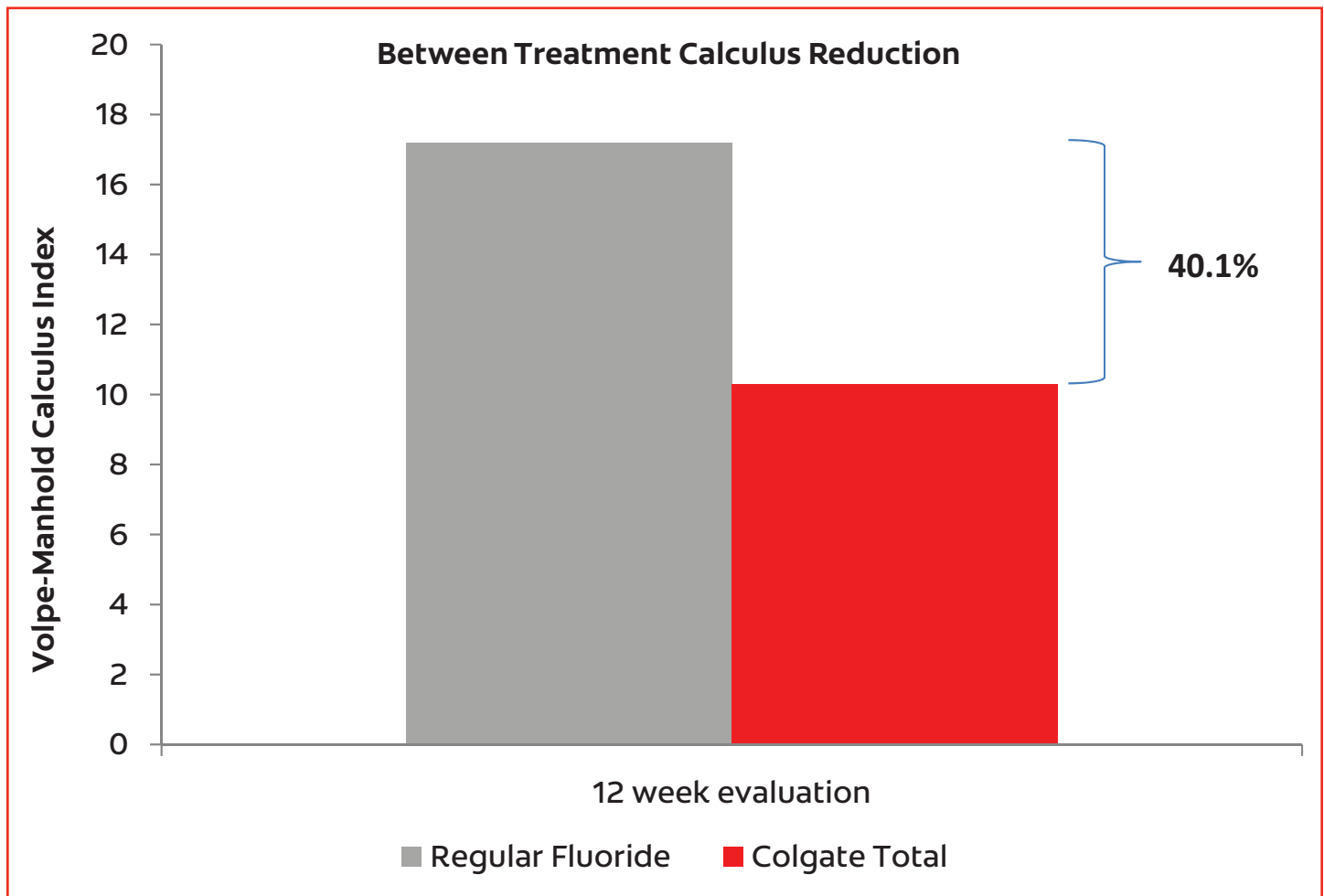
In this randomized, double-blind, parallel-group clinical study, 100 adult subjects were enrolled with an initial Volpe-Manhold Calculus Index score of at least 7.0. Subjects were given a complete oral prophylaxis, provided a control toothpaste and a soft bristle adult toothbrush, and were instructed to brush their teeth twice daily for one minute. After eight weeks of brushing with the control toothpaste, subjects returned to the clinical facility and were examined for baseline supragingival calculus formation via Volpe-Manhold Calculus Index. Subjects were then randomized into one of two treatment groups. All subjects were given an oral prophylaxis, provided their assigned toothpaste and instructed to brush their teeth for one minute twice daily (morning and evening) for 12 weeks. Comparisons of the treatment groups were performed using analysis of variance (ANOVA), and all statistical tests of hypotheses were two sided, and employed a level of significance of $\alpha=0.05$.



Results

At the 12-week examination, subjects assigned to the Test Group presented a mean Volpe-Manhold Calculus Index score of 10.30 and subjects assigned to the Control Group presented a score of 17.20. After 12 weeks of product use, subjects in the Test Group exhibited 40.1% less supragingival calculus formation relative to the subjects in the Control Group, which was statistically significant ($p < 0.001$).

Calculus Reduction After 12 weeks of Product Use



Conclusion

Colgate Total with Dual Zinc plus Arginine provides significantly greater control of supragingival calculus formation as compared to a regular fluoride toothpaste.