Comparative Efficacy of a Specially Engineered Sonic Electric Toothbrush with Unique Sensing and Control Technologies to Two Commercially Available Electric Toothbrushes in Reducing Plaque on Different Tooth Surfaces

F Ayad¹, DM Petrone², GN Wachs², LR Mateo³, P Chaknis⁴, F Panagakos⁴

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¹ Far Management, Inc., Mississauga, Ontario, Canada
² Concordia Clinical Research, Inc. Cedar Knolls, New Jersey, USA
³ LRM Statistical Consulting, Hoboken, NJ, USA
⁴ Colgate-Palmolive Technology Center, Piscataway, New Jersey, USA

Study Objective
The objective of this clinical study was to evaluate the efficacy of a new specially engineered sonic electric toothbrush with unique sensing and control technologies compared to two commercially available electric toothbrushes on established plaque over a four week period.

Trial Conditions and Methods

Products Under Investigation

Test Toothbrush: Colgate® ProClinical® A1500 Electric Toothbrush (Colgate-Palmolive Company, New York, NY) with Triple Clean brush head

Control Toothbrush 1: Oral-B® Smart Series 5000 Power Toothbrush (Procter & Gamble Co., Cincinnati, OH)

Control Toothbrush 2: Sonicare Flexcare Power Toothbrush (Philips-Sonicare Co., Stamford, CT)

Study Subjects
One Hundred and Eighty-Four (184) subjects were enrolled in and completed the study.

Methods
In this examiner-blind, randomised, three treatment, parallel group clinical study, 184 subjects were randomised into one of three treatment groups (N = 60 or 62) based on their baseline plaque scores. Following baseline assessment (pre-brushing), subjects were provided with their assigned electric toothbrush and commercially available fluoride toothpaste. They were instructed to brush their teeth for 2 minutes under supervision and according to the manufacturers’ instructions, after which time their plaque was once again evaluated (post-brushing). Subjects were then given their assigned electric toothbrush and toothpaste for use at home for the next 4 weeks after which they were evaluated for plaque. Plaque was assessed using the Rustogi Modification of the Modified Navy Plaque Index.
Results
At baseline, no statistically significant difference in plaque index was indicated among the three treatment groups. After the initial toothbrushing, subjects assigned to the test electric toothbrush demonstrated statistically significant plaque reduction in the interproximal region and gingival margin as compared to subjects who used the control toothbrushes. After 4 weeks of toothbrushing, subjects assigned to the test electric toothbrush demonstrated statistically significant plaque reduction in the interproximal region and gingival margin as compared to subjects who used the control toothbrushes. Results after 4 weeks are shown below:

Conclusion
A new specially engineered sonic electric toothbrush with unique sensing and control technologies provides significantly greater reduction of dental plaque on different tooth surfaces compared to two commercially available electric toothbrushes after 4 weeks of use.