Plaque Removal

in vivo study

Comparison of Plaque Removal by Philips Sonicare DiamondClean and Oral-B Triumph®

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Objective

To compare the plaque removal efficacy and safety of two power toothbrushes; Philips Sonicare DiamondClean and Oral-B Triumph with FlossAction brush head.

Methodology

One-hundred four healthy adults, aged 18-65 were enrolled in a randomized, single-blind, cross-over design, ethics-approved clinical trial (67 females, 37 males; mean age 37 years). Eligible subjects were non-smokers who were routine manual toothbrush users with a minimum plaque score of 1.8 (Lobene and Soparker Modified Quigley and Hein) following 24hrs (+/-4) plaque accumulation. Enrolled subjects were randomized and dispensed appropriate products for a familiarization period of three days, followed by manual toothbrush use for a three-day wash-out. Subjects returned to clinic following 24hr (+/-4) plaque accumulation and received a pre-brushing plaque assessment by a blinded examiner, followed by supervised brushing with the assigned power toothbrush, and a post-brushing plaque examination. Subjects were then dispensed the alternate power toothbrush per randomization and followed the same home-use procedure of power toothbrush familiarization followed by manual toothbrush wash-out. Subjects presented to clinic for their final study visit with 24hr (+/-4) plaque accumulation and underwent 'pre' plaque exam followed by product use and 'post' plaque exam. Subjects were then dismissed from the study.

Results

Philips Sonicare DiamondClean was statistically significantly superior to Oral-B Triumph in reducing surface plaque overall, (p-value 0.0059), and in hard-to-reach posterior interproximal areas, (p-value 0.0048). Both products were safe for use.

Conclusion

Philips Sonicare DiamondClean removed significantly more plaque than Oral-B Triumph when assessed over the entire dentition, as well as in hard-to-reach areas.

% of Plaque Reduction