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2513 Plaque Removal Efficacy of Two Power Brushes in Orthodontic Patients

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For patients with multibracket appliances the maintenance of proper oral hygiene is difficult and therefore may lead to increased plaque accumulation, which enhances the risk of caries and gingivitis. These patients require special and efficient oral hygiene aids. **Objective:** The aim of this study was to assess the plaque removal efficacy of two power brushes in orthodontic population. **Methods:** This study was a replicate single-use, two treatment, examiner-blind, randomized, four period crossover design. 44 Patients (14.7±2.48 years old) with multibracket appliances in upper and lower jaw were enrolled. After the acclimation period, the patients were randomly assigned to one of the four treatment sequences. Thus, each subject brushed two times with either an oscillation-rotation power toothbrush (Oral-B® Professional Care SmartSeries 4000™ with an Ortho brush head) or with a sonic toothbrush (Sonicare® FlexCare™ 900 series with a ProResults standard brushhead HX6011). The pre and post brushing plaque levels (measured in %) were assessed by Digital Plaque Image Analysis (DPIA). The plaque reductions were analyzed for treatment group differences using a mixed model ANCOVA for a crossover. **Results:** Both brushes provided statistically significant reductions from baseline ($p < 0.001$). The % plaque reduction was 66% for oscillation-rotation toothbrush and 61% for sonic toothbrush. Treatment effect test found that the oscillation-rotation brush was statistically superior (by 8.1%) in terms of plaque reduction than the sonic toothbrush ($p < 0.017$). **Conclusions: The oscillation-rotation power brush provided significantly better plaque removal than the sonic toothbrush in subjects with orthodontics. Both brushes were well tolerated.**



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2562 Twelve Week Gingivitis Response Consistency with a Stannous Fluoride Dentifrice

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Objective: This research evaluated the 12-week response consistency of a stannous fluoride dentifrice for gingivitis treatment. **Methods:** Institutional review was obtained for all pertinent materials, after which, informed consent was obtained from healthy adult volunteers with gingivitis. After oral examination, whole mouth gingivitis was measured by a trained examiner using the Löe-Silness Gingivitis Index (GI). Subjects were provided a blinded stannous fluoride dentifrice (blend-a-med Pro-Expert Gum Protection), a manual toothbrush, and instructions for oral hygiene use. Treatment was at-home and unsupervised, with subjects evaluated after 6 and 12 weeks use. Change in bleeding sites ($GI > 1$) during Week 6-12 was specifically evaluated to assess sustained treatment response in the absence of a dental prophylaxis. Visits were compared using repeated measures analysis, and a correlation was derived. **Results:** A total of 40 subjects had clinical evaluations at all visits. Mean (SD) age was 33.3 (11.5) years, ranging from 19-64, with considerable diversity evident. From the model, the mean (SE) number of bleeding sites was 10.3(0.99) at baseline. Bleeding sites decreased significantly ($p < 0.0006$) with use of the stannous fluoride dentifrice, with post-baseline mean (SE) bleeding sites numbering 5.9 (1.2) at Week 6 and 5.5 (1.6) at Week 12, representing 43% and 47% reductions, respectively. GI results were similar, improving by 45-47%. Overall, the Week 6 and 12 bleeding and gingivitis scores were highly correlated ($r > 0.92$), and post-treatment status did not differ significantly ($p > 0.53$ for bleeding or GI). **Conclusion: Use of a stannous fluoride dentifrice reduced gingival bleeding and inflammation by 43-45% within 6 weeks, with the clinical response sustained through 12 weeks without dental prophylaxis.**