

1299 Clinical trial on the effectiveness of an innovative powered toothbrush

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Objectives: To evaluate the effect of using an innovative powered toothbrush on oral hygiene and gingival condition. Methods: 43 healthy young adults aged 17 to 23 years were selected and scaling was provided prior to the study. At baseline, the subject's oral hygiene status was recorded by the Quigley–Hein plaque index (PI) and their gingival condition was recorded by the Loe & Silness Gingival Index (GI). One of the three study toothbrushes, (1) a powered brush with its rotation axis along the mid-line of the handle (T-f brush, LeadingWin Corp.), (2) a rotation oscillation powered toothbrush (Braun Oral-B D4510), and (3) a manual toothbrush (Active Angle, Colgate), was given randomly to the subjects. Standardized instructions for use of the assigned toothbrush were given on an individual basis. The subjects were asked to use the assigned toothbrush twice a day for 4 weeks. At week 4 and week 8, the above procedures were repeated and the subjects were randomly crossed-over to use another one of the test toothbrushes. A single masked examiner assessed the oral hygiene of the subjects at all examinations and another masked examiner assessed the gingival condition. Results: 39 subjects completed this 12-week study. The mean PI scores after using the innovative powered toothbrush, the rotation oscillation powered toothbrush, and the manual toothbrush were 2.72, 2.58 and 2.51 respectively (ANOVA, $p>0.05$). The respective mean GI scores were 0.40, 0.36, and 0.35 (ANOVA, $p>0.05$). No significant differences between the effects of the three toothbrushes on the mean PI and GI scores of different tooth types and tooth surfaces were found. Conclusions: The innovative powered toothbrush had similar effects on the subjects' oral hygiene and gingival condition as those following use of a rotation oscillation powered toothbrush or a conventional manual toothbrush. (Study funded by Jetta Company Ltd)

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