Effect of an oscillating-rotating power toothbrush on recession

ABSTRACT 3592

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OBJECTIVE

To observe the recession changes after six months clinical use of an oscillating-rotating power toothbrush and the ADA reference manual toothbrush.

METHODS

Healthy subjects were appointed to either brushing with the power toothbrush (D17U, Oral-B® Laboratories, n=55) or the ADA reference toothbrush (n=54) according to a prospective randomised, controlled, single-blind, parallel design. Participants were asked to brush their teeth twice daily for 2 minutes each with a standard fluoride toothpaste. Attachment loss [mm] and probing pocket depths [mm] were measured at six sites per tooth to the nearest mm by one calibrated examiner at baseline and after 6 months. Recessions were calculated as differences between CAL and PPD at every site.

RESULTS

On buccal surfaces between the canine and the first molar, CAL remained almost unchanged for manual toothbrushes (t1: 2.36±0.45mm; t2: 2.31±0.63mm; n.s.) and was reduced for the power toothbrush from 2.62±0.64mm to 2.46±0.84mm (p=0.008, Mann Whitney U-test.). The PPD reductions were found to be from 1.00±0.19mm to 1.02±0.25mm (manual, n.s.) and from 1.02±0.22mm to 1.01±0.28mm (power, n.s.), respectively. Recessions were reduced at these sites from 1.31±0.44mm to 1.25±0.56mm (manual, n.s.) and and from 1.57±0.64mm to 1.44±0.75mm (power, p=0.003).

CONCLUSIONS

The oscillating-rotating power toothbrush but not the manual toothbrush reduced recessions on the buccal surfaces of lateral teeth and canines. This study was supported by Oral-B Laboratories.

Effect of an oscillating-rotating power toothbrush on plaque and gingivitis

ABSTRACT 3595

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OBJECTIVE

To observe the changes in plaque and gingivitis after six months clinical use of an oscillating-rotating power toothbrush and the ADA reference manual toothbrush.

METHODS

Healthy subjects were appointed to either brushing with the power toothbrush (D17U, Oral-B® Laboratories, n=55) or the ADA reference toothbrush (n=54) according to a prospective randomised, controlled, single-blind, parallel design. Participants were asked to brush their teeth twice daily for 2 minutes each with a standard fluoride toothpaste. Gingivitis [Sillness & Löe Gingival Index] and plaque [Turesky modification of the Quigley Hein Index] were measured at six sites per tooth by one calibrated examiner at baseline and after 6 months.

RESULTS

On lingual surfaces, plaque was reduced from 0.82±0.51 (baseline) to 0.74±0.45 (6 months, n.s. Mann Whitney U-test) for the manual and from 0.75±0.40 to 0.61±0.39 (p=0.026) for the power toothbrush group. This corresponded to a change in gingivitis of 5% from 0.84±0.41 (baseline) to 0.72±0.36 (6 months, p=0.010) for the manual and of 7% from 0.71±0.40 to 0.63±0.38 (p=0.046) for the power toothbrush group. Due to the relatively low baseline levels on plaque and gingivitis, which is the main confounder for the amount of plaque and gingivitis reduction, changes on buccal surfaces failed to be statistically significant.

CONCLUSIONS

The oscillating-rotating power toothbrush but not the manual toothbrush improved plaque removal statistically significant at lingual surfaces. However, gingivitis was reduced statistically significant in both groups. Although, baseline values were lower in the power toothbrush group, the changes in this group were higher compared to the manual toothbrush group. This study was supported by Oral-B Laboratories.

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