Reviewer’s report

Title: Efficiency of chewable toothbrush in reduction of dental plaque in students

Version: 1 Date: 05 Mar 2019

Reviewer: Tobias K. Boehm

Reviewer’s report:

This is a short but interesting clinical trial evaluating plaque removal by a chewable tooth brush compared to a standard soft brush. The authors found that both brushes significantly remove plaque, but there is no significant difference in effectiveness which leads the authors to conclude that a chewable brush is equivalent to a conventional brush in plaque removal.

Strengths:
- Testing this novel type of "brush"
- Novel idea of using cell phones for surveys in this context

Weaknesses:
- Both groups have relatively low plaque levels, with the initial TQHI score suggesting a wide band of plaque near the cervical margin that becomes reduced to a narrow band of plaque at the end of tooth brush use. I suspect that the brushes are most effective in removing plaque from the middle to coronal portion of a tooth, and more research on high-plaque levels should be done, especially given the suggestion in the discussion section about special needs patients. However, this is beyond the scope of this manuscript and cannot be addressed without new research.
- Little information is given how chewable brushing compares to conventional brushing, which weakens the argumentative power of the manuscript. This can be addressed with more detail in the manuscript.
- Generally, more research would make this manuscript more clinically relevant although this is beyond of the scope of the manuscript for this journal. For example, additional research should explore if the reduction in plaque also produces reduction in gingival inflammation. Or, does long-term use of the brush with the high xylitol content reduce caries.

Suggested revisions:
- explain in more detail the oral hygiene instructions given to the patients as this is critical for the function of the brushes
- slightly revise the statistics M&M section to describe in more detail what groups where compared using the ANOVA method - I could not follow how the F-values were calculated in the statement "...there was a statistically significant change in the amount of plaque in time.... There is a statistically significant interaction between groups and changes in the amount of plaque in the observed period..."

- expand on chewable brushing was done: How long did subjects chew? Was there any specialized instruction on using the chewable brush?

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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