Reviewer's report

Title: Effectiveness of three oral hygiene regimens on oral malodor reduction: A randomized clinical trial

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Reviewer: Nao Suzuki

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This clinical study compared the effects of tooth brushing, tongue cleaning, and mouth rinsing on oral malodor. According to the results, tooth brushing alone could not improve oral malodor, but additional mouth rinsing and tongue cleaning significantly reduced VSCs. Furthermore, a combination of tooth brushing, mouth rinsing, and tongue cleaning was the most effective regimen for improving oral malodor.

Major comments
1. The results of this study serve as a useful reference for controlling oral malodor. Overall, the research was suitably conducted to investigate oral malodor. A major problem with the research is that oral malodor was evaluated from 2 pm to 5 pm, at least 2 hours after drinking, eating, and oral hygiene practices. In their previous report [15], mouth washing with ClO2 controlled oral malodor for around 4 hours. Therefore, the short-term effect, and not the effect of prolonged intervention, may have been evaluated for ClO2 mouthwash. I believe that measuring oral malodor in the morning without drinking, eating, or oral hygiene practices would be a better approach.

Minor comments
2. A total of 63% (30/48) of study subjects had oral malodor at baseline, which was higher than 30-50% of the general population who suffer from oral malodor. Please expand on this result.

3. Was a toothbrush for cleaning tongue same with that for cleaning teeth? Was a standardized toothbrush used in the study?

4. The inspection method of BOP is unclear. Please describe teeth and sites that were assessed.

5. In the Results section, the author described that Group B had significantly lower tongue coating scores than group A from the 2nd to 4th weeks (Table 2). However, there was no significant difference between the two groups at the 3rd week (P = 0.058).

6. Table 2. Although there was no significant difference between the two groups (P = 0.054), the tongue coating score of Group A decreased during the first week. If possible, please elaborate on this observation.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.