Reviewer’s report

Title: Effectiveness of Lifestyle Change plus Dental Care (LCDC) program on improving glycemic and periodontal status in the elderly with type 2 diabetes

Version: 1
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Reviewer: Sudaduang Krisdapong

Reviewer’s report:

Major comment:
This study was conducted with a sound and thorough methodological procedure. Manuscript was well written with a good structure and clear descriptions. However, my concern is about the significance of findings. This study seems not to provide any new knowledge. The design does not match with study's justification and therefore, findings cannot fill the gap of knowledge. Justification of this study relates to a lack of knowledge on the effectiveness of combined intervention (lifestyle change plus periodontal care), whereas the effectiveness of each single intervention (against routine programme as a control) is generally known. Many previous studies on the effectiveness of single interventions (either lifestyle approach or oral care program) were referred to in Background and Discussion. Therefore, to test the effectiveness of the combined intervention, single intervention should be used as a control group. In other words, to see whether there is any additional benefit gained from combined intervention, compared to single ones. However, this study applied routine program as a control group, as a consequence, better outcomes can certainly be expected. In addition, authors mentioned about bidirectional relationship between DM and periodontal health. Previous studies also showed that the improvement of either could effect the other one. Therefore, additional cross-benefit obtained from combined intervention might be another interesting outcome. ie. comparing periodontal improvement between groups with single behavioural change intervention and combined intervention, and comparing DM improvement between single oral care intervention and combined intervention.

Another comment relating to the above mentioned, authors referred to a previous study in Thailand (paragraph 3 of Discussion) where DM improvement was not significant after periodontal conventional treatment. This point confuses the issue because the conventional or routine care (either giving advice on lifestyle change or periodontal treatment without serious oral hygiene instruction) is known to be ineffective. Throughout this study and from existing knowledge, effective single interventions refer to kinds of carefully and seriously given instructions (eg. MI technique, counseling). Thus, there is no use to mention about the ineffectiveness of routine care/treatment.

Minor comment:
Although relevant details are completely provided, writing for publications needs
to be more concise, than dissertation style. Figure can be deleted if description in texts is already clear. Tables 2-7 could be put together or some could be deleted. For example, Tables 4, 6 can be deleted, and findings on the non-significance at base line can be described in texts. Then, Tables 5,7 can be put together of which some variables can be presented in one row, eg. ‘toothbrush (yes)’ in stead of 2 rows 'yes' and 'no'. Tables 2-3 can also be together.

**Level of interest:** An article of limited interest

**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.