Reviewer’s report

Title: Number of natural teeth, denture use and mortality in Chinese elderly: A population-based prospective cohort study

Version: 4  Date: 28 Dec 2019

Reviewer: Torsten Mundt

Reviewer's report:

The authors of this population-based prospective study evaluated longitudinal associations between the number of missing teeth/denture use and all-cause mortality:

Strengths of the study may be the big sample size, the inclusion of several possible confounders and the prospective design.

Main limitations are the data assessment without any clinical examination, the unknown time points and causes of death. In older age, deaths due to several forms of cancer are very probable. Older people with a history of cancer were apparently not excluded in this study. I think this fact is another limitation.

The manuscript has been improved by the changes after the first review. However, other issues remain while reading the manuscript:

1. In another observational study (Schwahn et al. Missing, unreplaced teeth and risk of all-cause and cardiovascular mortality. Int J Cardiol 2013;167:1430-1437) a reduced unrestored dentition was associated with an increased all-cause and cardiovascular mortality risk, and an induction period of at least 5 years was proposed for the analyses of the relationship between the number of unreplaced teeth (denture use) and mortality. In the present study, an observation period longer than 3 years was considered only in the additional sensitivity analyses. This should be discussed.

2. Obviously, fixed dental prostheses were not considered for the analyses of tooth replacement. One could assume that such restorations are not prevalent among the elderly in China? Please explain.

3. According to the baseline characteristics, the majority of participants with either no or few remaining teeth (two third of the edentulous participants and 83% of those with 1-9 remaining teeth) had no dentures. In Western Europe or Japan, the proportion between denture users and no-users among persons with no or few remaining teeth is rather the other way around. What are the reasons for these differences between the populations? Please discuss!

4 I am not a native English speaker, but I feel the paper suffers a bit from grammar mistakes.
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:

Needs some language corrections before being published

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