Reviewer's report

Title: Impact of gingival bleeding and gingival enlargement on Oral health-related quality of life (OHRQoL) of subjects under fixed orthodontic treatment: A cross-sectional study

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Reviewer: Atsushi Saito

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BMC Oral Health Review

This study attempts to delineate the association between OHRQoL and gingival enlargement and gingival bleeding in subjects receiving fixed orthodontic treatment.

The study is well written, but the following points should be considered before a decision for publication can be reached.

Major compulsory revisions

1. Study aim is not clear.
Did the authors try to investigate the association between OHRQoL and periodontal conditions (as stated in the last sentence in p3) or association between OHRQoL and variables in patients receiving orthodontic treatment? Whether the main focus was placed on periodontal condition or orthodontic treatment (or both) is not clear, and it appears as if the conclusion was made before the actual results were in.

2. The selection of OHRQoL instrument
The rationale behind the selection of OHIP-14 to assess the association the authors wish to delineate is not shown.

3. Diagnosis and types of orthodontic treatment
In relation to the comment 1, clinical (periodontal) diagnoses for the subjects are not shown.

I feel that types and stages of fixed orthodontic treatments may significantly influence the patients’ quality of life. Regarding this, the authors only included ‘time receiving’ orthodontic treatment into the analysis, and in my opinion, this is not sufficient.

4. The concept of quality of life
The notion of ‘quality of life’ can be found in many parts of the manuscript. Although quality of life is a general term, I would recommend the authors to use ‘oral health-related quality of life’ where appropriate.
Minor essential revisions

Introduction
p3 L1 “…QOL is a reflection of the degree of satisfaction with one’s family and social life.”
I do not feel that the notion is appropriate. Please specify the reference.
p3 L6
There was no basic explanation of the basic concept of OHRQoL in this paper.
p3 L13
This review on the impact of periodontal disease and OHRQoL is not very sufficient.
p4 L1
There is a wide range in the age group for subjects included in the study. The life stage is vastly different; juveniles, young adults and adults. Please provide information that shows the use of the particular instrument is valid in these age groups receiving this type of treatment.
p4 L9
Please provide more detailed information regarding the orthodontic treatment.
p4 L9
Inclusion criteria are extremely broad. This could potentially include patients with various degrees of periodontitis and other oral complications.
p5 L7
Describe what ‘PD’ stands for.
p5 L9
Describe what ‘BOP’ stands for
p5 L10
I am puzzled as to this description regarding periodontal status. What do the authors mean by ‘most participants’? If the authors try to delineate the relationship between periodontal condition and OHRQoL, they need to provide values for PD and CAL. If a patient has gingival enlargement, there is a possibility that he or she has deep periodontal pocket.
This problem relates to the lack of appropriate diagnosis of periodontal disease.
p5 L10
Define ‘PPD’ and ‘CAL’. Does this ‘PPD’ differ from ‘PD’?
p6 L7
What is the significance of calculating both gingival bleeding and bleeding on
probing?

Please check if this description of OHIP14 is appropriate (OHIP-14)?

Results

Is it appropriate to direct the readers to Table 4 without first noting Tables 1 to 3?

What are the suspected causes for the gingival enlargement observed in these subjects? This can potentially have significant impact on the relationship with OHRQoL.

Define ‘whole mouth bleeding’.

Table II? Table 2?

The notion of periodontal status is too broad.

In this study, no criteria or definition of periodontal disease are shown.

Here, the authors provide another version of study aim, which is different from those described elsewhere. Now the authors’ focus is placed on the aesthetic aspect, which is not exactly the same as ‘periodontal condition or status’.

No clinical diagnosis is presented in the results or method section.

Please define the authors view on ‘young subjects’.

**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.