Author’s response to reviews

Title: Correlation between clinical parameters of crown and gingival morphology of anterior teeth and periodontal biotypes

Authors:

Xiao-jie Yin (yinxiaojie0716@163.com)
Bang-yan Wei (55366589@qq.com)
Xiu-ping Ke (jyjcwlywh69@163.com)
Ting Zhang (15866716697@163.com)
Meng-yang Jiang (jiangmengyang13@163.com)
Xia-yan Luo (1533129575@qq.com)
Hui Qiang Sun (whitedove69@163.com)

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Author’s response to reviews:

Dear editor,

Thanks for your review. The following are our responses to reviewers’ comments one by one. Please check them out.

Reviewer reports:

Ana Lúcia Pompéia Fraga De Almeida, PhD (Reviewer 1):

Dear authors,

The paper is interesting but it needs some corrections to be considered for publication.

1) The article has some typing and formatting errors that should be corrected.

The manuscript has been sent to proofreader for improvement.
2) The authors have used the term periodontal phenotype instead of periodontal biotype. Please authors should update.

We have used the term periodontal biotype instead of periodontal phenotype, and the latter is just used in the title of literature [7] and [8], so we can’t modify it.


The bibliographic references have been updated, and literature [12] is quoted in pages 3 - line 3 and page 17 - line 16 in the manuscript.

4) Did the authors make sample calculations?

We had made sample calculations that involved 56 subjects whose maxillar y casts were scanned using an intra-oral scanner to derive model files in the STL format, numbered #1-#56. Then, the *.STL files were imported into SpaceClaim software to generate three-dimensional digital models, and ultimately the measured data was analyzed to obtain a summary table.

5) What is the null hypothesis of the study?

It is assumed that periodontal biotype has no correlation with the clinical parameters of crown and gingival morphology (CGM) of the maxillary anterior teeth (MAT).

6) Did the authors make sample calculations?

See the above.

7) The discussion should be improved.

We have modified the overall grammar and typing by a native proofreader.

8) The conclusion must meet the objectives.

Modification has been made as required; see page 2 - line 9-11 and page 19 - line 5-7.
9) The authors need to correct several citations in the text such as page 3 - line 20, page 15 - line 7, page 16 - line 8.

Citation was forgotten to be marked in Page 15 - line 7, and it has been corrected. The full name of the magazines where references at Page 3 - line 20 and page 16 - line 8 are from has been changed into abbreviation.

Y Sun (Reviewer 2): Yin's research explored the clinical parameters of crown and gingiva of maxillary anterior teeth, and then analyzed the correlation between these parameters and periodontal biotype using an intra-oral scanner and 3D digital model. This method is innovative. Some suggestions for revision:

1) There are some problems with English expressions, for example the title, which needs a professional language editing service.

The manuscript has been sent to proofread for the professional language editing, including title.

2) There are too many abbreviations in this paper. Some of them are commonly used (such as PH, CL/CW), while some of them are not (such as CGM and MAT), which makes it more difficult for readers to understand. In addition, at the beginning of the main body (page 2 line 17-18), there were not full names of the abbreviations PB and CGM.

The full name of PB and CGM has been described in the background part of the abstract (page 1 line 8-9), so we need not change it.

3) P6 line 8 and 11, from the definitions of "Crown length" and "Bucco-lingual width of the crown", "clinical" crown length and "clinical" bucco-lingual width of crown were measured, but not "anatomic" crown length and "anatomic" bucco-lingual width of crown. By intra-oral scanner, it was impossible to confirm enamelo-cemental junction. Therefore, "anatomic" crown length and "anatomic" bucco-lingual width of crown were also impossible to be measured, which were more closely related with periodontal biotype. This is the limitation of intra-oral scanner and needs to be discussed in discussion.

“Clinical” crown buccal lingual width is defined as the distance from the apex of the palatal gingival margin closest to the apical direction to the midpoint of the labial gingival margin. The width of the buccal lingual direction of the anatomic crown is defined as the distance from the apex of the palatal gingival margin closest to the apical direction to the apex of the labial gingival margin closest to the apical direction at the border of the palatal enamel cementum. The length of the “anatomic” crown and the width of the “anatomic” crown in the buccal and lingual directions cannot be detected in clinical practice, which is of theoretical significance, but not of clinical value. Compared with the “clinical” crown buccal lingual width and the “anatomic” crown buccal lingual width, the crown buccal lingual width at the gingival attachment has the
most direct and convenient influence on gingival biotype. Therefore, we chose to measure the width of the “clinical” crown, and the buccal and lingual directions, which is consistent with Olsson’s method.

4) Page 6 line 13 and 15, what were the differences between "contact surface width" and "contact surface height"? The definitions were vague and difficult to understand.

We have updated the pictures (Page 7 Fig 2), which can better help readers understand the definitions of "contact surface width" and "contact surface height".

5) Page 7 Fig 2 There were some Chinese characters in Fig2, which needed to be replaced by English characters.

We have updated the pictures (Page 7 Fig 2).

Thanks again for your review and guidance. Please feel free to contact me if you have any other questions.

Best regards,

Sincerely yours,

Huiqiang Sun