Author’s response to reviews

Title: The Candida species that are important for the development of atrophic glossitis in xerostomia patients

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Author’s response to reviews:

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Dr. Hidenobu Senpuku, PhD, DDS

BMC Oral Health

Dear Dr Senpuku,

We are grateful for the opportunity to revise our paper OHEA-D-17-00074 entitled “The Candida species that are important for the development of atrophic glossitis in xerostomia patients”, and the helpful comments of your reviewers.
We attach a version showing the tracked changes and, separately list our point-by-point responses. We feel that the comments have allowed us to improve the paper and hope you convey our gratitude to the reviewers.

Yours sincerely,

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Thank you for your review of our paper. A point-by-point response has been provided below.

First, authors used Student's t-test for comparisons of Candida species or age. Student's t-test is applicable only when data had normal distribution. The same can be indicated for Pearson's correlation and linear discriminant analysis. Authors should present the distributions had normality. If data did not show normal distributions, non-parametric analyses such as Mann-Whitney U test, Spearman's rank correlation and logistic regression analysis.

Response: We agree to this point and changed the method section significantly.

We used non-parametric analyses in the revised version.

Second, authors proposed the prediction model using discriminant function of C. albicans CFU, saliva flow rate and age, in addition to relationships of those factors with atrophic glossitis should be used. Prediction model is valuable when estimation of precise diagnosis by simple screening or prediction of future incidence by current status. However, the target of the prediction model was present atrophic glossitis that was easily judged by inspection. Rather,
measurements used for the prediction were hard to obtain. I think the prediction model is not valid in this study design.

Response: We used a logistic regression analysis in the revised version instead of a discriminant analysis.

Finally, the subjects enrolled in this study were patients whose main complaint is dry mouth. To generalize the results from this study, the sampling bias should be considered. However, no discussion was done in this paper.

Response: We agree to this point. The sampling bias is inevitable. So, we have used some words to explain this point in the Title; this is “in xerostomia patients”

Minor Essential Revisions

Page 4, line 18: …are also pathogenic in humans [2, 8-13] A recent…

There is no period between sentences.

Response: Changed as suggested. (Background section, line 18, page 4)

Page 7, line 11: Candida colonization

This may mean amount of Candida. Please discriminate colonization (detection) and amount (colony count) of Candida through this paper.

Response: We agree to this point, and the manuscript has been carefully amended, according to your suggestion. For example, we have changed “colonization” to “colony counts” in the Background section, line 12, page 4; Materials and Methods section, line 11, page 7.
The patients were divided into four statuses (denture wearing/non-denture wearing).

This sentence suggested that authors carried out one-way ANOVA of Candida amounts for 4 groups. Please revise the sentence to be suitable for 2-way ANOVA description.

Response: The sentence has been rewritten in the revised manuscript. (Materials and Methods section, line 13~16, page 7)

Hyposalivation [RSFR ≤1.5 mL/15 min]

Please show the reference that supports the validity of this cutoff value.

Response: A reference has now been included, reference (16), in addition to 15. Also, we have added a word “(≤0.1 mL/min)”. (Materials and Methods section, line 13~15, page 6)

Study population

A total of 231 patients…189 were women (81.8%).

This sentence as well as the subtitle should be described in materials and methods section.

Response: These sentences have been moved to the Materials and Methods section. (Materials and Methods section, line 19~21, page 5)

Page 7, the last line - page 8, line 12.

This paragraph corresponded to Table 1 was hard to follow because Table 1 included 2 tables. Two tables entitled Table 1 should be separated. Accordingly, manuscript should be revised.

Response: Table 1 has been separated into two tables. (Table 1 and 2) And, manuscript has been revised. (Results section, line 8~12, page 8)
Page 9, lines 1-3: A chi-squared test revealed...extent (Table 1). The chi-squared test also revealed that denture wearing was associated with atrophic glossitis.

I cannot understand whether denture wearing was associated or not with atrophic glossitis. In addition, p-values should be shown.

Response: We have added a contingency table (Table 4), and have amended the explanation in the text (line1~4, page 9). p-values were shown in the text (line 2~3, page 9) and table.

Table 1
As described above, tables in Table 1 should be separated.
Please confirm the values in the rightest column of the second table.
In both tables, addition of summary line of Grade 1-4 is recommended.

Response: Table 1 has been separated into two tables, and revised as showing in Table 1~2. Moreover, we have added another table (Table 4) according to your suggestion. Instead of the addition of summary line of Grade 1-4, which was recommended by the reviewer 1, we have added a contingency table to compare two groups; the absence (Grade 0) and presence (Grade 1~4). (Table 4)

Table 2
Atrophic glossitis and number were presented in every lines. Please simplify and clarify the table.

Response: We have remade the table. (Table 3)

Table 5
I think this table is not needed as described in the overall comment.
Response: We have removed the table.

Figures 1-3

These graphs were not suitable to present results of 2 way ANOVA. Please clarify 2 factors, inter-group difference, intra-group difference and interaction between factors.

In addition, title of Y axis is not valid. Please revise to the other title e.g., "amount of Candida".

Response: We have added a legend. Y-axis has been amended. (Figure 2~4)