Reviewer's report

Title: First characterization of methanogens in oral cavity in Malian patients with oral cavity pathologies.

Version: 0 Date: 27 Jul 2019

Reviewer: Khaled Altabtbaei

Reviewer's report:

Thank you for sending me this interesting manuscript to review. I appreciate that the authors have taken the time to address the issues identified previously. In the current state of the manuscript, I have some additional minor comments that I believe will enhance the applicability of the results once addressed:

-In several areas of the manuscript, a species was identified as "Methanobrevibacter massiliensis" along with quotation marks. I believe the author is describing the species identified by Hong T. T. Huynh (DOI: 10.1186/s13104-017-2980-3) which is M. massiliense. If so, then the name should be corrected, and be written without the quotation marks, as is the convention in writing species names.

-The abstract should mention that the authors were investigating both methanogens and associated bacteria

*Methods:

-While the authors have addressed the previously mentioned issue of not including inclusion and exclusion criteria, there are some inconsistencies regarding the inclusion and exclusion criteria and the patients that were recruited. For example: the authors mentioned that patients with periodontitis and dental abscesses were recruited yet table 1 has identified patient 2, 7 and 8 as gingivitis patients.

-Moreover, while the periodontitis classification criteria has been addressed, it is still unclear whether the abscesses were of a pulpal or periodontal origin.

-In a similar fashion, patient #4 has been identified to have "Circumscribed cellulitis of the primary molar 75". While I appreciate that the authors have identified the clinical features of the case, it is important to know the actual diagnosis of the case based on established diagnoses by a professional society. The reason for this is because the term "cellulitis" can describe very different cases, depending on the region of the reader. For example: some readers which follow the ICD10 diagnoses code would only consider cellulitis involving fascial spaces to be the viable
diagnosis worthy of the use of the term "cellulitis", which is by definition not circumscribed to
an intraoral region, and has a much higher morbidity potential than a circumscribed abscess
related to a necrotic pulp. A viable alternative would be to further describe the clinical findings
in the case due to the differences in what could be considered as "cellulitis" among readers from
different countries. This can be simply addressed by indicating the cause of the problem (pulpal
necrosis? gingival abscess due to foreign body impaction? ...etc). This will allow readers to
associate the clinical features with a diagnosis using vernacular consistent with their region.

- While it is mentioned in the discussion, it would be useful to discuss in the inclusion criteria
that patients were recruited regardless of their recent antibiotics usage status due to its prevalent
pre-operative usage in the studied population.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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