

Dear Alexandre Curvelo:

Your submission Effectiveness of Chlorhexidine on Microbial Colonization and Surface Roughness of Dental Prosthetic Materials to Brazilian Dental Science, has been revised and according to reviewers' comments, there are questions to be addressed and/or points to be clarified/corrected.

Please answer the reviewers considerations point-by-point in a separate document and also please make all the corrections in the text highlighted in yellow.

Deadline: 15 days.

Thank you for considering Brazilian Dental Science for publishing your research.

We are looking forward the revised version of you manuscript.

Sincerely,

Prof. Bruno Matos.

Editor.

Questionnaire

Does the manuscript contain new and significant information to justify publication? Yes

Does the Abstract (Summary) clearly and accurately describe the content of the article? Yes

Is the problem significant and concisely stated? No

Are the methods or research design described comprehensively? Is the statistical analysis adequate? No

Are the interpretations and conclusions justified by the results? No

Is adequate reference made to other work in the field? Yes

Is the language acceptable? Yes

Reviewer 1:

Comments to the Author

The authors evaluated the effect of the incorporation of chlorhexidine in acrylic resin for relining prosthetics. However, the methods for evaluating its anti fungal effects are very preliminary and major drawbacks are potentially not explored.

Candida albicans have different forms, as yeast or as hyphae, and just evaluating inhibition halos around planktonic cultures could lead to misleading results. I think it's necessary to evaluate the potential antimicrobial effect by using a validated oral biofilm model, and potentially explore other concentrations of CHX to demonstrate dose-response and validity of the model. Only two groups (no incorporation and 1% incorporation) can mask results.

Also, major drawbacks on the material stress response such as compression, tension, shear, bending are not being evaluated. The incorporation of antimicrobials on acrylic are known to lead to changes in material characteristics and this is not being properly addressed, except for surface roughness. Surface roughness is important regarding biofilm formation and accumulation, but stress is also very much important because it can lead to material fracture, loss of prosthetics, etc. The authors should address these issues.

Reviewer 2:

Comments to the Author

Dear author, please see the following comments:

Materials and methods:

- Specimens preparation

1. How were the specimens sterilized before the experiments?

- Agar diffusion

1. Regarding the positive control, was also used 1% CHX? What volume was added to the paper disc?

- Colony forming units (CFU) visual counting:

1. Were the specimens washed before vortexing (in order to remove non adherent cells)?

2. Vortexing was enough to detach biofilms from the specimens?

- Roughness of Specimens Incorporated with Chlorhexidine Diacetate

1. How long were the specimens immersed in artificial saliva? 28 days? In this part it is better to be clear about the experiment conditions.

Results:

- Table II

1. Regarding these results, it is not surprising that the positive control presented the best result because CHX was in a paper disc. Diffusion through agar is much easier from paper than resin.

Discussion:

1. What are the limitations of the study?

Brazilian Dental Science

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