Reviewer's report

Title: Sonic irrigant activation for root canal disinfection: power modes matter!

Version: 0 Date: 04 Feb 2020

Reviewer: Ana Cristina Andrada

Reviewer's report:

Nicely written manuscript. I suggest changing the title to simplify it. My questions include: why the selected microbes were used in this experiment? Why not using a more common mix of Endodontics pathogens and as a cocktail instead of using them isolated as endodontic infections are polymicrobial in origin. Short term infection protocol should have included irrigation with NaOCl as it is more clinically relevant. The irrigation protocol in a clinical setting does not consist only of saline irrigation. Long term irrigation protocol is different from short term what makes it harder to compare. NaOCl is antimicrobial and the combination with sonic activation demonstrates better disinfection. Wouldn't the same results be expected for short term with NaOCl irrigation as well. Or even better results as the biofilm is not mature? You have stated in the discussion: "This in vitro investigation showed that the power modes of a sonic irrigation device have a significant impact on the antimicrobial efficacy in root canals." How can you translate that to the clinic if irrigation protocol is not the same as clinically used? These concerns and comments should be addressed on the limitations of the study.

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

Yes

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?
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I recommend additional statistical review
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Acceptable

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