Reviewer’s report

Title: The Effect of Adjucitive Chlorhexidine Mouthrinse on GCF MMP-8 And TIMP-1 Levels in Gingivitis: A Randomized Placebo-Controlled Study

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Reviewer: Peter Celec

Reviewer’s report:

As emphasized by the authors, matrix metalloproteinases play an important role in periodontal tissue destruction. The manuscript describes the effect of chlorhexidine (gold standard antimicrobial agent) on GCF levels of matrix metalloproteinase MMP-8 and tissue inhibitor of matrix metalloproteinases TIMP-1 in gingivitis patients.

It should be highlighted that this study is a carefully designed placebo-controlled clinical study. In the pre-screening phase 215 patients were assessed for eligibility for the study. In the end 50 gingivitis patients meeting inclusion criteria were assigned to CHX or placebo group. The methods and aims are well defined and described. The tables and figures are self-explanatory and appropriately complement the results section. The research found no additional benefit of 4-week adjunctive CHX treatment on GCF MMP-8 and TIMP-1 levels in gingivitis patients. On the other hand, it was shown that 4-week daily plaque control increased GCF TIMP-1 levels regardless of CHX treatment. The limitations of the study are objectively summarized in the discussion.

To conclude, the manuscript presents novel and original data and the conclusions drawn are adequate. The topic is of interest in the field of periodontal diseases. I have no further comments and suggestions how to improve the manuscript. I would recommend to accept the manuscript for publication.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests