Reviewer's report

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

Version: 1 Date: 3 March 2014

Reviewer: Ulrich Schlagenhauf

Reviewer's report:

The manuscript suffers from several shortcomings which render it unsuitable for publication in its present form:

Major Compulsory Revisions:

Study Design related Problems

Effectiveness of Oral Hygiene Instructions

Although the aim of this study was to evaluate the additional benefit of an antibacterial CHX mouth rinse on clinical and serological parameters in patients with instructed oral hygiene, the data from the placebo group suggest, that the oral hygiene instructions given were basically useless and had very little if any impact on the quality of oral home care as indicated by the level of gingival papillary bleeding or the level of plaque on the tooth at baseline and at week 4.

A third experimental group neither receiving any oral hygiene instructions nor any rinsings over the 4 week period would have allowed to quantitate the effect of oral hygiene instructions alone

Statistical Analysis

In the manuscript a p-value (p<0.05) is given for comparisons which revealed no significant differences between the two experimental groups. The validity of the statement of "no difference" however needs to be verified by the calculated test power.

Furthermore during the statistical analysis a multitude of group comparisons were made. It is not stated in the manuscript whether the level of significance (p<0.05) has been adjusted accordingly for multiple testing

Minor Essential Revisions

The recording of the Papillary Bleeding Index PBI (Saxer & Muehlemann) is not explained during its first appearance in the manuscript

It is not explained in the manuscript whether ELISA and IFMA were performed using commercial test kits (which kits?)

A drop-out rate of 38% (37/97) is unusual for a simple mouth rinse trial and
should be explained more in detail.

The English language of the manuscript is in need for improvement and should be revised by a native speaker

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare that I have no competing interests