Reviewer’s report

Title: Evaluation of serum zinc levels in patients with recurrent aphthous stomatitis (RAS)

Version: 0 Date: 09 Oct 2016

Reviewer: Stephen Mason

Reviewer’s report:

The manuscript is generally well written and I think it deserves publication

However there are two main area's which need to be significantly upgraded before I can recommend acceptance.

Firstly the fundamental research hypothesis is weak as written. My recommendation is to expand the research hypothesis for a relationship between Zinc and RAS. Otherwise this may appear as more of a "fishing” expedition. Equally in the introduction, there is no mention of potential sub-groups MiRAS, MaRAS and HeRAS and how these might relate to serum Zinc. As the work looks at sub-groups some explanation should be made in the introduction together with more commentary on the proposed hypothetical Zinc relationship with RAS

Secondly there is no explanation of the statistical hypothesis or justification for a sample size and variability expected in the research. The reader has no understanding why 75 subjects were chosen or whether it is a convenience sample. However statistical comparisons have been undertaken and therefore more explanation of the statistical plan prior to the research should be included . If this is a pilot/preliminary study then 75 seems too large. If there is a basis for a sample size of 75,based on prior research, the analytical technique proposed, its sensitivity and specificity then this fits as part of the proposed research hypothesis.

Thirdly assuming the statistical conclusions are valid and that there is no relationship to serum zinc levels the discussion needs to tie back to the first two points. It may be useful to speculate on further research hypothesis / directions

Some commentary should be added that none of the patients had active RAS at the time of study

As a general comment while serum Zinc has been analysed for each subject, an analysis of salivary zinc (and comparison) may have added to the research and make it even more relevant to Oral Health Research

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?**
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Yes

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I am able to assess the statistics

**Quality of written English**
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Acceptable

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