**Reviewer’s report**

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

**Version:** 1  **Date:** 20 Apr 2017

**Reviewer:** Sergio Uribe

**Reviewer’s report:**

Page 6 line 148: change "Chi-square test was used to assess the association..." to "Chi-square test was used to assess the independence of variables between...". Since x2 test doesn't assume a direction of the association, instead just the independence, something that may result in an association.

Indicate the power of the selected sample size. See Hypothesis Testing: Two-Sample Inference - Estimation of Sample Size and Power for Comparing Two Means in Bernard Rosner's Fundamentals of Biostatistics. With the data supplied in the table 2, results a power of 0.054 (<0.8) (calculated with G*Power 3.1.9.2).

t tests - Means: Difference between two dependent means (matched pairs)

**Analysis:** Post hoc: Compute achieved power

**Input:**
- Tail(s) = Two
- Effect size dz = 0.0230259
- α err prob = 0.05
- Total sample size = 72

**Output:**
- Noncentrality parameter δ = 0.1953812
- Critical t = 1.9939434
- Df = 71
- Power (1-β err prob) = 0.0542669

This issue must be addressed in the manuscript, since low power, by definition, means that the chance of discovering effects that are genuinely true is low. That is, low-powered studies produce more false negatives than high-powered studies. This low power can explain the result of this research. Even if other research use a small sample, this is no reason to not add the power calculation of the present research.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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