Reviewer's report

Title: Non-significant association between -330 T/G polymorphism in interleukin-2 gene and chronic periodontitis: findings from a meta-analysis

Version: 0 Date: 08 Jun 2019

Reviewer: Ana Maria Sell

Reviewer's report:

Manuscript Title: "Relationship between -330 T / G polymorphism in interleukin-2 gene and chronic periodontitis: findings from a meta-analysis"

Page 4, Line 38.

In contrast to what is said in the manuscript, Scarel-Caminaga et al. conclude that there is an association between the -330 T/G polymorphism of IL2 and the severity of periodontitis. Still, Li et al. conclude that the results obtained after a logistic regression do not support the hypothesis of an association between this SNP and periodontitis.

Page 5, line 11.

"[(interleukin OR cytokine OR interleukin-2 OR IL-2) AND (genetic variation OR rs2069762 polymorphism OR -330 T/G polymorphism) AND (periodontitis OR periodontal disease OR chronic periodontitis)]" - Search in Pubmed n=567, publication dates: until March 2, 2019.

No reproducibility was obtained for the search strategy described in the manuscript. How did the authors obtain the total number of articles mentioned in figure 1 (n=389)? Were the terms and search strategies the same for all selected databases? Has any additional limit been used?

An article by Kobayashi et al. was not cited in this manuscript. This article can be found at: &lt;https://doi.org/10.1177%2F0022034509350037&gt;, and in Web of Science. Does this article meet the criteria to be selected for meta-analysis or a qualitative analysis?

Some MeSH terms can be simplified, because they are redundant in some MeSH trees (e.g Pubmed). This would facilitate the understanding and the rationality of the search.

Table 1.
Information about Hardy-Weinberg equilibrium is not mentioned in this manuscript. Vahabi et al., for example, did not observe the presence of the G allele in their study. What would be the weight of these data in a meta-analysis of the magnitude of the polymorphism effect if you cannot measure the distributions of frequencies between cases/control?

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Figure 2.

The authors of the manuscript used the same control group of Scarel-Caminaga et al. two times in the analysis. This double count may interfere with the estimation of the results. The Cochrane Handbook provides some recommendations for this situation: a simple recommendation to avoid this would be combine all the relevant intervention groups in the study into a single pair-wise comparison. Another strategy could be to select one of the intervention groups and exclude the other, although this will result in some loss of information. You can check more strategies to analyze multiple groups from one study in the Cochrane Handbook.

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.

No

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

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Please indicate the quality of language in the manuscript:

Acceptable

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