Reviewer's report

Title: IL-13-1112 Polymorphism and Periodontitis Susceptibility: A Meta-analysis

Version: 0 Date: 01 Jun 2017

Reviewer: Hermann Agis

Reviewer's report:

In their study the authors evaluated the role IL-13-1112 polymorphism in periodontitis. Therefore they performed a meta-analysis based on a search in the China National Knowledge Infrastructure, Wanfang, PubMed, Embase, and Cochrane Library for studies up to 11/2016 including case control trials on the topic. Based on their results the authors conclude that IL-13-1112 polymorphism may be associated with susceptibility to chronic but not aggressive periodontitis. Although the study is focused on an interesting topic relevant for the field of periodontal research it there are several issues that need to be resolved before it meets the high quality standards of BMC Oral Health.

Major Issues:

1) It is unclear how many studies were included 4 or 5? The authors should clearly this. E.G.: See figure 1 and table 1

2) Indeed the authors explained that studies on the role of IL-13-1112 polymorphism come to different conclusions. However, it remains unclear how this meta-analysis based on 4-5 studies can resolve this issue. The authors conclude that the IL-13-1112 polymorphism may have a differential impact on chronic and aggressive periodontitis. However, only two studies were included which investigated the effect of aggressive periodontitis and three studies which investigated the effect of chronic periodontist. What benefit does this meta-analysis have compared to the original studies? The authors should speculate on this.

3) The authors included one study form Germany and three studies from China. For which populations can the authors make conclusions based on their study? Have there been reports of differences in the effect of the IL-13-1112 polymorphism in the German population and the Chinese population?

4) The search strategy is unclear. Please present the search algorithm and the decision tree. Ensure that you followed the guidelines for presentation of Meta-Analysis.
Minor Issues:

1) Abstract: Please clarify the search strategy in the materials and methods of the abstract. Also the conclusion is very weak. What did the study show? What was the mayor finding? This is in particular of high importance as a meta-analysis was provided which should extend our knowledge beyond the findings of the included original articles.

2) Background & Discussion: The authors should provide an in detailed analysis of the current knowledge on IL-13, IL-13-1112 polymorphism including the different types, and the role in other inflammatory diseases. This should also be discussed in the discussion section.

3) Background: The authors should present why this study is required and what the benefit of this meta-analysis is in addition to providing a summary of the available literature studies.

4) Background & Discussion: The authors state that different conclusions on the role of IL-13-1112 polymorphism have been published. What are divergent results are found in the literature? The authors should present those divergent conclusions and also discuss them in the discussion section.

5) Discussion: The authors should present future perspectives. What is the clinical relevance of their findings and how can they be translated into the clinical practice. What are their suggestions for the future and what should be the focus of future research?

6) Raw data: The authors state that the datasets are available on reasonable requests. What is a reasonable request? BMC strongly encourages the authors to provide the raw data. This would be of importance for future meta-analysis that can build on the data which was collected by the authors.

7) Acknowledgements: As reviewer I appreciate to be acknowledged. However, this is the first time that I have seen that authors put this into their acknowledgement section of a manuscript. Personally I would find it more important to acknowledge the work of the authors who published the original articles on which this meta-analysis is based on than on my input as reviewer.

8) The manuscript should be revised with the support of a scientifically trained native speaker.
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.

Yes

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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