Reviewer’s report

Title: Association of circulating leptin and adiponectin with periodontitis: A systematic review and meta-analysis

Version: 0 Date: 02 Feb 2017

Reviewer: aswathikutty aswathikutty

Reviewer’s report:

This is a well-performed meta-analysis which has collated empirical evidence to elucidate the relationship between periodontitis and adipokines (leptin and adiponectin). The basic components of the review, especially inclusion/exclusion criteria, search strategy, quality assessment, data synthesis, analysis, and limitations are presented explicitly with minimum errors. The amount of effort put forth by authors to conduct the subgroup analysis, regression tests, Galbraith plots and sensitivity analysis to assure the robustness of meta-analyses is appreciable. However, there are minor issues that the authors need to address.

First of all, the title of the manuscript does not completely reflect the research question/ PICO, as the main objective is not to assess the levels of adipokines in patients with periodontitis but to compare the levels between the two study groups.

Second, although the authors have done an extensive literature review about the topic, it is imperative to precisely state the clinical or public health significance of monitoring the leptin/ adiponectin among healthy and unhealthy patients. For instance, estimating adipokines profile may allow clinicians to predict the susceptibility to the disease.

Third, information on the inclusion/exclusion of non-English literature, gray literature or unpublished/ older data (date restrictions-from which date) is missing under the reporting characteristics, which might have led to reporting bias.

Fourth, nothing is mentioned about the assumptions made or approaches adopted, to deal with the missing/unclear data from primary studies. Additionally, illustrative plots (Figure 2, Figure 3 and Figure 4) are ambiguous and unclear to assess them. If possible include sample size with forest plots. More importantly, findings of the present study can be analysed only in the view of its other potential limitations such as (a) methodological diversity in estimating periodontal disease and cytokine levels, (b) extracted studies had both adjusted and unadjusted data (c) quality of individual study & (d) sample size variability, all of which definitely questions the validity of study.

This paper is acceptable for publication after these minor revisions.

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?**
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 am able to assess the statistics

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

Acceptable

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