Author's response to reviews

Title: An Estimate of Pocket Closure and Avoided Needs of Surgery After Scaling and Root Planing With Systemic Antibiotics. A Systematic Review.

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Version: 4 Date: 5 October 2014

Author's response to reviews:

Dear Prof. Sculean

Thank you very much for the suggested amendments and the constructive criticisms.

Please find below a description and explanation of the changes made in the revised manuscript.

All changed text sections in the full text are highlighted by the track-change mode as requested.

Reviewer 1:
Andrea Mombelli
Reviewer's report:
This review takes a new approach to analysing the benefit of amoxicillin and metronidazole in non-surgical therapy. The paper is generally well written and follows the guidelines for such work. Some desk editing could further enhance grammar and style.
MCR: none
MER:
Introduction: The term "batch-wise destruction pattern" is odd. Consider revising.
Response: Thank you very much for the suggestion. We changed the odd term into: „intermittent destruction process“
Methods: "... by two independent reviewers (MK and PS)". Who is PS? Author Schmidlin or Sahrmann?
Response: In the revised text, we defined the reviewers more precisely: "... by two independent reviewers (Kolakovic and Sahrmann)"
The conclusion "data calculation failed to show" should be changed to "due to missing data the benefit could not be calculated", or similar.

Response: Thank you for the kind suggestion. We have modified the phrase as follows: „Based on the currently available data a potential benefit in terms of the possible avoidance of surgical interventions could not be delineated.“

Feres 2012 (Ferres in Table 2) and Preus 2012 are missing in the reference list. There may be other problems, I just spotted these. The authors should carefully cross-check their ref-list with the manuscript. In addition, the references in the tables should always be cited in the same format, for example the year in four or two digits.

Response: We carefully checked the cited literature for missing citations and decided to add the excluded articles as well in order to allow for clear identification. Furthermore, we adapted the years of publication into four-digit numbers throughout the tables as reasonably requested.

Level of interest:
An article whose findings are important to those with closely related research interests

Quality of written English:
Needs some language corrections before being published

Response: The paper was revised by a native speaker in order to enhance the language quality of the text.

Statistical review:
Yes, but I do not feel adequately qualified to assess the statistics.

Response: We are not sure whether you ask for a revision of the statistical section („Yes“) or not: As you did not point out detailed issues we assumed that you might not have wanted revisions. Please disabuse if necessary!

Declaration of competing interests:
I am author and co-author of several papers reviewed by the authors. Apart from that I have no competing interests.

Reviewer 2:
Stefan-Ioan Assis.Professor Dr.Dr. Stratul
Reviewer’s report:
Major compulsory revisions

Page 4, line 12: please consider the inner buccal mucosa and its recesses (Fish
& Eisenring) as reservoirs of pathogens.

Response: Thank you for your kind suggestion. To our grief we were not able to find your recommended studies in PubMed nor are we familiar with the impact of the suggested niches despite our great interest in the topic. As in our eyes an extensive and complete list of niches might not be crucial to the reader in the introduction section we would kindly suggest – with all our respect - to skip your recommendation.

Page 5, line 4: You are right when relating residual PPD>3mm to an enhanced risk for bacterial re-growth. However, bacterial re-growth does not always mean progression of the disease, which is measured rather by the loss of attachment, bleeding etc. Don’t you think CAL would have been a more suitable parameter for the decision surgery/avoidance of surgery?

Response: Thank you very much for your critical annotation. Deep pockets, especially when showing bleeding as symptom of inflammation, has been shown to be a strong predictor for attachment loss (Matuliene J Clin Periodontol 2008). Therefor, this symptom indicates a high risk for future loss of attachment. It is – to our understanding – the more reasonable parameter than to detect an already underwent attachment loss. Finally, as both parameter are strongly linked but the deep pocket might precede the attachment loss, we would like to leave this text section unchanged.

Page 5, line 8: please consider mentioning the CPITN/PSR index with its cut-off values for surgical referral, which are widely used in general practice in establishing the indications for periodontal surgery.

Response: Thank you very much for this prudent suggestion. We added your idea in a separate phrase: „This fact is well-reflected in the cut-off values for pocket depths of the Community Periodontal Treatment Index of Treatment Needs (CPITN) and the Periodontal Screening Record (PTR)“.

Page 7, line 9: please explain why smokers were not specifically excluded, as smoking is an important risk factor for the progression of the periodontal disease.

Response: Thank you for this important request! We clarified by rewriting the sentence as follows: „In order not to exclude an entity that is often specifically treated with a concomitant antibiotic medication smokers were not excluded.“

Page 8, line 25-26: are you sure that bringing together studies on chronic periodontitis with studies on aggressive periodontitis does not influence the heterogeneity of the systematic review, as it is not clear for which diagnosis the additional use of antibiotica is more beneficial in terms of clinical improvements?

Response: You are right. Bringing together studies on both chronic and aggressive periodontitis results in enhanced heterogeneity of the review.
However, recent studies show that both diagnosis may be treated successfully with antibiotics and result in better outcomes. Recent reviews by Sgolastra et al. (both J Periodontol 2012) showed that the benefits for both diagnosis do not vary to a relevant degree. Subgroup-analysis for both diagnosis on the other hand would have decreased the power of the analysis. We therefor decided to explicitly report our approach and to include both diagnosis in the same meta-analysis.

Page 12, lines 2-4: the meaning of the phrases is not clear enough to me. Please reformulate, more clearly.

Response: Again, thank you very much for your helpful suggestion. We changed the phrases like follows: “However, such a request needs time to push through and as long as this claim is not generally fulfilled, the proposed statistical model offers a useful alternative method to combine and compare study results in such a way.”

Page 13, line 17: should the last sentence/conclusion be perhaps regarded as a statistical pitfall? The statistical interpretation and the results are well explained (page 11), however, given the extremely important implications of the study for the daily practice (surgery vs. avoidance of surgery), and given your own finding of single trials which report residual pockets > 5mm (with subsequent clear indication for surgical pocket reduction), don’t you think the last conclusion is somewhat misguiding (especially when correlating with the first conclusion)?

Response: Following the other reviewer’s suggestion we changed that conclusion and the statement has slightly shifted in the new version. We changed the phrase into. „Based on the currently available data a potential benefit in terms of the possible avoidance of surgical interventions could not be delineated.“

Minor essential revisions
Page 2, line 4: please insert “o” in “antibiotic”.
Response: Thanks a lot. We eliminated the error.

Page 3, line 23: please insert (probably) “and” between “microbial challenge” and “successful prevention”.
Response: Another very good suggestion. Thanks a lot!

Page 5, line 10: please consider replacing “different” with “various”.
Response: We did so. A good recommendation!

Page 9, line 9: please consider replacing “gargle solutions” with “mouthwashes”.
Response: Again, we followed your suggestion gladly.

Page 11, line 9: please remove one of “the” in the beginning of the line.
Response: Thank you!

Page 12, line 14: please remove “an”
Response: Absolutely. Thanks!

Discretionary revisions
Page 8, line 5: please provide a few more words on the statistic software R.
Response: Hopefully we could satisfy your demand with the few words that we added: „All analyses were performed with R, a free software environment for statistical computing and graphics [31].“

Level of interest:
An article of outstanding merit and interest in its field
Response: Thank you very much for this big compliment!

Quality of written English:
Acceptable
Response: A native speaker revised the text in its current form in order to enhance English language.

Statistical review:
No, the manuscript does not need to be seen by a statistician.
Response: Thanks again!

Declaration of competing interests:
I declare that I have no competing interests.