Reviewer’s report

Title: Effect of Intra-Pregnancy Nonsurgical Periodontal Therapy on Inflammatory Biomarkers and Adverse Pregnancy Outcomes: A Systematic Review with Meta-Analysis.

Version: 0 Date: 08 May 2017

Reviewer: Claudio Pannuti

Reviewer's report:

1. Reference # 15 is not a Systematic Review.

2. INTRODUCTION: general comment.

Indeed, Systematic Reviews of observational studies show conflicting results (although the majority of them suggest an association)

However, when it comes to Systematic Reviews of INTERVENTIONAL STUDIES, there is little conflict. The results of most of the reviews (including one of our group) show that periodontal treatment is NOT associated with a reduction in adverse pregnancy outcomes (APO).

As indicated by Michalowicz et al (2013), when only larger and high-quality trials are considered, "there is no significant effect of non-surgical periodontal treatment on rates of preterm birth or low birthweight".


Obviously, SRs of RCTs are more important, since randomization controls for all confounding factors, including "relative obstetric risk and other factors which are known to influence the prevalence of APO".

Thus:

- Considering the limitations of observational studies in demonstrating effect of interventions

- Considering that many systematic reviews of interventional studies have shown no evidence of effect of periodontal therapy on APO,

- and considering that this is a SR of INTERVENTIONAL STUDIES, in my opinion, introduction should be re-written. Introduction should focus on SRs of interventional studies
and the effect of periodontal therapy on periodontal inflammatory biomarkers (mainly on pregnant women)

3. In this context, the aim of this SR should also be changed. Assessing the effect of periodontal therapy on APOs only in trials that ALSO assessed biomarkers can lead to a bias in the results and conclusions.

Only 04 trials were selected (trials that assessed BOTH pregnancy outcomes and biomarkers). However, one not-so-recent SR (Kim et al. 2012) identified 12 trials. Many important publications, such as Michalowicz et al (2009), were not included in the present SR, because biomarkers were not tested.

In my opinion, this review should focus on inflammatory biomarkers, only.

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