Reviewer's report

**Title:** Periodontal disease and spontaneous preterm birth: A case control study.

**Version: 1 Date:** 16 May 2006

**Reviewer:** Alice R. Goepfert

Reviewer’s report:

General

In this manuscript, the authors report a case-control study evaluating the previously published association between spontaneous preterm birth and periodontal disease. In addition, the authors evaluated selected biomarkers of active periodontal disease measured in the GCF and spontaneous preterm birth. Overall, the methods are sound and the manuscript is well written. The addition of the biomarkers makes the report novel and interesting.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

There are no major errors or additional statistical analyses that must be completed to be considered for publication. However, there are some criticisms that need to be addressed that do not fit in the category “minor essential revisions” or “discretionary revisions.” These include:

1. The authors have failed to reference and comment on a publication that is very similar to the current study (Goepfert, et al Obstet Gynecol 2004;104:777-83). In that study, there were 59 women with spontaneous preterm birth at <32 weeks, 36 with an indicated preterm birth < 32 weeks and 44 term controls. The women were examined in the immediate postpartum period. There was a significant association between severe periodontal disease and SPTB but not term or indicated preterm births. Therefore, the comments on page 12 “previous studies have used definitions rather than just spontaneous preterm birth” and on page 5 “in contrast to the studies published to date, this study restricted outcome to only spontaneous preterm birth <35 weeks gestation” are incorrect. The Goepfert study results also question any association with “ascending chorioamnionitis” (page 15) when assessed through the traditional methods of placental histology.

2. The authors need to report the mean ± SD gestational age a) at the time of exam for the undelivered control group, b) at delivery for the undelivered control group, c) at delivery for the term control group.

3. There is no mention of race/ethnicity, a known risk factor for preterm birth and periodontal disease. If there are substantial numbers of women of different race included in the study then this also needs to be considered in the logistic regression.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Offenbacher is from the University of North Carolina at Chapel Hill, not Alabama (Jeffcoat was at Alabama for the published studies cited), page 4.

2. Page 4, second paragraph, 5th sentence seems to be missing words “The population in from the subjects??”.

Discretionary Revisions (which the author can choose to ignore)

One of the difficulties in comparing the published studies of periodontal disease and preterm birth is the variable definition of periodontal disease. In most papers where there is an association demonstrated, there has been some sort of cut-off for moderate or severe periodontal disease. The authors do not use any of these (≥3mm or ≥5 mm attachment loss in ≥3 sites is the more common one) cut-offs and in fact do not define periodontal disease. The 3.5 severity index gets at this but it would be helpful to compare the same definition of periodontal disease in this study.
**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

'I declare that I have no competing interests'