Reviewer's report

Title: The vaginal microflora in relation to gingivitis

Version: 2 Date: 22 September 2008

Reviewer: Patrizia Brigidi

Reviewer's report:

Major Compulsory Revision

Abstract
The results section of the Abstract is confusing and sometimes in disagreement with what is reported in the paper. In particular:

- Page 2 (Results section). The sentence “The bacterial cell counts in vaginal samples were significantly higher in subjects with BV for 49 out of the 74 species” is not correct. According with the results, significantly higher bacterial loads were observed in women with BV for only 38 species, listed in the paragraph “The vaginal microflora of women with and without bacterial vaginosis” (page 5). Differences were found for 49/74 species when the Authors compared by Kruskal-Wallis test the vaginal microflora of women belonging to the groups BV+/G+ and BV-/G- (page 6 and 7).

- Page 3 (Results section). “Oral samples of T. forsythia were found at higher counts in women with BV and gingivitis than in women with BV without gingivitis”. This result is never reported in the main text of the article. I do not understand: was this experiment performed by the Authors? What does it mean “oral samples”? The study was centred on the analysis of the vaginal microflora. Oral samples are not cited in the text.

Background
This section was considerably shortened and it is more clear.

Results
This section is clearer than in the previous version of the manuscript.

1. Pages 6 and 7. As I said in my previous review, I think that the results about the differences in the vaginal microflora between women of the BV+/G+ group and women of the BV-/G- are neither significant nor useful. In the revised version, the Authors added the sentence “Trends of higher counts in vaginal samples were found in women in the BV+/G+ group in comparison to the BV+/G- group for P.bivia, P.disiens, M.curtisi and M.mulieris (all at the p<0.01 level). No differences in vaginal counts for any of the bacteria studied in vaginal samples were found between the BV-/G+ and BV-/G- groups”; I believe that these are the only results scientifically valuable.

2. A figure (box plot) was added to the manuscript, but it is not numbered. Moreover, none of the reported results are referred to that figure.
Discussion

In my opinion, the discussion is still too long. Moreover, there are a lot of ambiguities and contradictions.

1. Page 8. “While the present study failed to demonstrate differences in the quantities of bacterial species commonly associated with gingivitis and periodontitis, a group of 10 bacterial species found at significantly higher levels in subjects with BV was also found at significantly higher levels in subjects with gingivitis.” If I correctly understood, this sentence is referred to the results reported in Table 2, but the bacterial species reported in the Table 2 are 7 instead of 10.

2. Page 8. “Specifically oral samples of T. forsythia were found at higher counts in the GV+/G+ group in comparison to counts in the group of subjects belonging to the BV+/G- group.” This is never reported in the Results section. Moreover, according to the M&M section, only vaginal sample are considered for the analysis.

3. Page 8. I do not understand the meaning of the sentence “In accordance with the study by Boggess et al., the data presented here indicate that B. ureolyticus and M. curtisi were commonly found in vaginal samples. Bacteria such as A. actinomycetemcomitans, P. gingivalis, T. forsythia, T. denticola and P. micra, commonly found in periodontal pockets, were not specifically found in vaginal samples of subjects with gingivitis. The role of these bacteria in the etiology of preterm birth in the context of oral/gingival infection might therefore be less obvious than previously thought. Further studies are needed to assess the relationship between subjects with or without gingivitis in relation to an expanded panel of bacteria.” What is the relationship of these statements with the results reported in this study?

4. Page 10. “The present study clearly identified that women with the combination of BV and gingivitis had increased levels of many species as identified from the vaginal samples”. If this is referred to the comparison BV+/G+ vs. BV+/G-, the increased bacterial species in the BV+/G+ group were only four (P. bivia, P. disiens, M. curtisi, M. mulieris), not “many” (page 7, Results section). If it is referred to the comparison BV+/G+ vs. BV-/G-, as I already stated, I believe that this data is not noteworthy.

5. Page 10. “The analysis of bacterial levels based on the four different combinations of vaginal and periodontal diagnostic criteria demonstrated that the highest levels of a large number of different bacteria in the vaginal samples occurred among women who were positive for both BV and gingivitis”. This sentence is not supported by results and, as I stated in the previous review, it is a repetition. The Authors wrote in the cover letter that they deleted this sentence but the sentence is still there.

6. Page 11. “In conclusion, the results suggest that P.bivia, P.disiens, and T.forsythia may be of importance in subjects with BV and gingivitis.” Again, T. forsythia, is never cited in the results section. In the cover letter the Authors wrote that “all data have been cross-checked”, but it does not seem to me.
7. The final part of the Discussion section should be more focused: the essential conclusions of the study are not clearly stated.

Minor Essential Revision

Page 4 (Background section) delete “?” in the sentence “…bacterial species known to be associated with gingival ? disease”. I reported this mistake in my previous review, the Authors wrote in the cover letter that they deleted this mistake but it is still there.

Page 8 “GV+/G+” should be BV+/G+

Pages 10 and 11. There is a repetition: “In conclusion” at the beginning of two consecutive sentences.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests.