Reviewer's report

Title: Association between Diabetes related risk factors and clinical periodontal parameters in Type-2 diabetes mellitus

Version: 4 Date: 25 September 2013

Reviewer: Rathna Devi D Vaithilingam

Reviewer's report:

Reviewer’s Comments
Generally an interesting article looking at the association between diabetes related factors and clinical periodontal parameters in Type 2 diabetics. The authors have corrected most of the major comments addressed by the previous reviewer. However there are certain issues that still need to be looked into.

Minor essential revision
1) The authors have mentioned diabetes related risk factors in the title and in background, paragraph 4 and 6. Similarly they mention diabetes behavior factor in background, paragraph 5. Diabetes risk factor will include genetics and BMI levels. These were not variables that were used and therefore the term ‘risk factor’ may not be appropriate. A better term would be diabetes-related factors which the authors have used in other parts of the article.

2) There are some grammatical and typo errors.
   a) Results, paragraph 1 – general health should be replaced by lifestyle factors -“…oral hygiene behavior factors …”
   b) Discussion, paragraph 2- several periodontal i indices
      - …periodontal health status in ..
      - …periodontal bleeding index to assess..
   c) Discussion, paragraph 4- …oral health education has been shown to have a significant.....

Major compulsory revision
1) Aims in the abstract and background seem to differ. The background does not include the aim of describing the periodontal health status of individuals with type 2 diabetes. Conclusion in both the abstract and manuscript does not include the first aim which was to describe the periodontal health status of individuals with type 2 diabetes.

2) In the background, paragraph 5, it should be mentioned that Lalla and colleagues reported their findings on periodontitis in diabetic youth. The other references given (16-18) were cited in 1968, 1978 and 1982. Please provide more recent references.
3) The authors have mentioned that examiner reproducibility was not done for the study. This is a significant drawback on the validity of their results. They have mentioned in their letter of response that the weakness of using CPI/ Russell’s Periodontal index is the “sensitivity to individual error according to examiner’s finger pressure”. This should have been clearly stated as one of the limitations of this study.

4) The authors have modified the questionnaire developed by Park (1985). Was this questionnaire validated prior to being used in the study? No information was provided on this matter.

5) CPI and Russell’s index cannot be used as numeric data unlike probing pocket depths and probing attachment loss. They need to be retained as ordinal indices.

6) In the second last paragraph of the discussion, it was mentioned that …ex-smokers might have been categorized into the non-smoking group. Please elaborate and state clearly why this is a limitation to the study.

Level of interest: An article of limited interest

Quality of written English: Acceptable

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

Declaration of competing interests:

I declare that I have no competing interests