Reviewer’s report

Title: Two-year randomized clinical trial of enamel matrix derivative treated infrabony defects: radiographic analysis.

Version: 1 Date: 9 August 2014

Reviewer: Fabricio Zanatta

Reviewer’s report:

General comments
This split-mouth randomized clinical trial study describes the radiographic endpoints of an infrabony defects treated by sub-gingival scaling and root planning with or without enamel matrix derivative. Using a sample of 10 subjects, the authors didn’t found significant differences between treatments.

The topic is of interest for a scientific perspective because works with a radiographic endpoint and presents a follow up of 24 months, which brings new information to the topic. The writing is acceptable and the question posed by authors is well defined. The results, discussion and conclusions are well balanced and supported by published data. The title and abstract adequately convey what was found. However, there are some aspects that called my attention when reading this paper on description of methods and limitations of the study. Major compulsory revisions into the text should be provided for better understanding as follow.

2) Specific Comment and Recommendations for Revisions

Methods
Pag. 5, line 66 – Who was the person that conducted the randomization process? Please clarify in methods.

Pag. 5, line 69 – When the patient has more than a pair of defects, how was randomized test and control defects? How was the selection of which pair of defects would initially be treated? Please clarify.

Pag. 6, line 77 – Who was the person that applied the endogain gel? Was the same operator? If so, he was not blind to the treatments sites and could have done the instrumentation differently? Please clarify and add some consideration about the possibility of bias.

Pag. 6, line 84 – During the supportive periodontal program, it was not perform, if necessary, any additions subgingival intervention on treated sites? Please clarify in methods.

Pág. 7, line 102 – The intra-class correlation coefficient described is for all radiographic measures? Please provide information on the calibration process.
Pag. 7, line 110 – For sample size calculation it was considered a paired sample? If so, please add in sample size description.

Pag. 7, 121 – It was performed any statistical test to verify data asymmetry? If so, please clarify.

Discussion

- There were clinical differences in CEJ-AC values between groups at final exam. The lack of significant differences may be due the lack of power. Please add some rational explanation for these in discussion. Would the randomization failed? Provide a paragraph with this and others limitations of the study

- pag 11, line 204 – There are a published meta-analysis (Do the clinical effects of enamel matrix derivatives in infrabony defects decrease overtime? A systematic review and meta-analysis) that explored the follow up time of endogain results and showed that Endogain presents slightly better clinical outcomes than OFD, which possibly decrease overtime. If consider reasonable, add it on discussion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interents