Reviewer's report

Title: Comparison of intraoral radiography and cone-beam computed tomography for the detection of periodontal defects: An in vitro study

Version: 3 Date: 3 March 2015

Reviewer: Lucas Pinheiro

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Major Compulsory Revisions

Two important limitations of this study must be emphasized. The simulation with burs is not the best method to reproduce the lesions. This method produces well-defined defects that do not look like real lesions. This kind of lesion is easier to be detected.

Another limitation is the soft tissue simulation. The wax used in the study simulated only the gingival tissue. Water is usually used to mimic the other soft tissues, like muscles and skin.

Minor Essential Revisions

About the methods, the simulation of periodontal lesions is not well described. Information such as type of used drill, lesion size and exact location of lesions are relevant and they were not described in the methods section. Which CBCT images were used for analysis? MPR, cross sections images? It should be described.

The Figures are good, but it is interesting add some close images of simulated lesions in gold standard.

The discussion are well balanced and adequately supported by the data.


A paragraph about Radiation dose should be added in the discussion section.

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

Quality of written English: Needs some language corrections before being published
**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.