Reviewer's report

Title: The significance of cone beam computed tomography and the limitations of panoramic radiographs in the visualization of anatomical variations and lesions in the maxillary sinus for patients undergoing dental implant planning in a private dental office in Japan

Version: 1
Date: 13 March 2014
Reviewer: claire forbes-haley

Reviewer's report:

Compulsory Revision

1. Is the question posed by the authors new and well defined?
Title imply patients receiving dental implants but patients are also included that did not receive dental implants, these patients should be excluded or the title changed.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
Those patients did not have dental implants but had CBCT should have the reason for the prescription of the CBCT explained, or data on a table but reason quoted are too vague and if there were taken just t be added to the study then this would not be ethical and therefore justification is required.

3. Are the data sound and well controlled?
Non implant patients were included, not stated in title. unclear how the patients were selected, just over a period of time, if so was this all patents in this period with CBCT or selected patients, or random selection, what was inclusion and exclusion criteria.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Tables 1-8 missing, not title on the first table or column labels. Table 9 should be used as a template for others. Unable to determine suitability of results as missing data.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Some repetition in results and discussion, omit opinions from results.

6. Do the title and abstract accurately convey what has been found?
Not intierly as non implant patients data was included.
7. Is the writing acceptable?

Needs inclusion in introduction of definitions of the different types of lesions found in maxillary science maxillary sinus. Inclusion on how these different findings in the sinus can effect the placement of dental implants. These additions would make the paper more clinically relevant and explain the need for the paper in the first instance.

Page 4 line 8 alteration such as "sinus" floor elevation "and bone grafting".
Page 6 line 11, and so on..... additions to information as suggested above.
Page 6 line 15 define FH
Page 7 paragraph one and two are very repetitive, could be condensed into one.
Figues 6 & 7 & 8 need titles and labelled axis
Page 12 line 12 more commonly.... quantify
Page 12 line 15 caries alone is not an inflammatory lesion, re word.
Page 13 line 7 particularly low..... quantify
Page 17 poorly worded, could have more impact if re-worded.

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

Quality of written English: Acceptable

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

Declaration of competing interests:

No competing interests.