Reviewer’s report

**Title:** Accuracy and clinical safety of guided root end resection with a trephine: a case series

**Version:** 0  **Date:** 16 Oct 2019

**Reviewer:** K Ioannidis

**Reviewer's report:**

This is an interesting study that aims into providing with some preliminary data regarding the accuracy and clinical safety of guided root end resection with a trephine.

Although a small sample size is used in this study, the paper should offer some guidelines on this technique as well as some drawbacks. These findings should be a good reference point for a future clinical study which may assess this technique and compare it with different root end resection techniques in association with clinical outcomes.

Before its publication this paper merits significant revision to improve its content.

Title: exploratory should be changed into ' case series study'

Abstract:
Add in background an introductory sentence about root end surgery

'to find out' change into justify

In Methods
details of age and gender not needed please delete
Methodology lacks consistency please add 1 or 2 more sentences
Root end resections were succesfully performed
Guided implant surgery - the reader cannot understand the comparison

In Conclusion
The sentence needs re-writting. It does not reflect the results

BACKGROUND
page 2
line 6-7: write: However the results of a meta-analysis...
line 25-26: do not use capitals on cone beam computed tomography
line 28: a must cannot be used - instead use is essential or mandatory
line 37: re write: In 2007, author et al. .....
line 1-2 and 11-15: re write to improve syntax
line 18: Ahn et al.
last paragraph: Add reference for your personal unpublished data
line 33-43: This text does not belong to back ground. please re write and give clear aims and objectives of study, it is necessary to add description of the study parameters and whether they are used before

Materials and methods
page 4
criteria by Kim line 14 -- you need to mention those
inclusion criteria: type of teeth, periodontal status, quality of root filling, restorability of teeth please be more precise
exclusion criteria: please write them

page 6
line 16: 5months - why not 6 months as recommended by guidelines? please explain
line 54-55: why were results expressed as median and not mean (SD)? please discuss

page 7
statistical analysis (most possible need of non parametric tests) is missing - please discuss

Results
Please rephrase-- You cannot use terms 'in most' and 'in the rest'
line 42-44: why do you use mean values in this section?

overall there is a lack of statistic comparisons between the predicted values from the cbct software and the actual clinical values obtained after the performance of the surgeries

Discussion
page 8
lines 9-11: but you have not made any comparison with 'free hand' surgical procedures
line 15: this is speculation.
Safety does not correlate to postoperative symptoms, which is a biological process which may or may not occur after surgery.

Please rephrase

page 9
lines 1-5: however angular deviation for guided implant placement is not relevant with root end resection. Please discuss
lines 17-18: you have not provided success rates for the surgical treatments.
Therefore you cannot correlate and speculate that this method of angular deviation should be clinically acceptable

Conclusions
page 9
lines 51-55: the entire section needs re-writing
in this section it seems as the authors re phrase discussion
in the conclusion section you summarise only briefly your findings. The rest text goes into discussion section

References
page 12
Your references are not formatted according to the journals guidelines.
Please re-write accordingly

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

'I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not
be published.

I agree to the open peer review policy of the journal