Reviewer’s report

Title: Applying intraoral scanner to residual ridge in edentulous regions: in vitro evaluation of inter-operator validity to confirm trueness

Version: 1 Date: 13 Aug 2019

Reviewer: Florian Beck

Reviewer's report:

* Line 19-20/p2: be more precise…Trios2 was not the reference data!!! -> The intraoral scanner data (Trios 2, 3Shape A/S) was overlapped with the reference data.

* Copyediting of the whole manuscript is still lacking!!!

E.g. Line 26/p2: this sentence is hardly to understand…as edentulous requires a noun! please revise this sentence! Line 31/p2 should be: …in the premolar region, respectively, and 0.18mm and 6.82mm2 in the molar region

Line 37/p2 should be: No significant difference was observed between those two values.

* Line 43-44/p2: I would reconsider the clinical relevance as "a smooth surface such as the palatal region" in vivo on the one hand does not exist (maybe on the reference model in vitro) and on the other hand the palatal region is actually better recognized by intraoral scanning compared to the floor of the mouth; here again it matters whether we scan free end saddles in the upper or the lower jaw and the degree of bone resorption (high-well rounded ridges compared to low-depressed or knife-edged)

* Line 39/p2 vs. Line 57/p3: first you demonstrated satisfactory inter-operator trueness (line 39/p2) and later in the manuscript you investigated the trueness of intraoral scanning (line 57/p3 or line31/p8) which actually isn't the same! i.e., the inter-operator comparison could show satisfactory results if their results did not differ to much or … satisfactory trueness was achieved as the results were close to the reference scan!

* Line 2/p4: it is not clear what kind of (novel?) method you established? I would skip this sentence or explain it into more detail in the m&m/results/discussion section

*Line 41/p4: please be more accurate concerning all the technical details provided in the M&M section….stating "3shape. com" is not sufficient (which should be referenced in the bibliography and not in the main text): either provide the whole URL linking to these data or explain if these facts can be found in the manual, data safety sheet, backside of the scanner…. 

* Line35-39/p5: please revise this sentence as it is not clear whether this (precision?) applies to your study and the meaning is hardly to get

* Line47/p5: please add that these results refer to the edentulous model!
* Line 47-49/p6: I would skip this sentence as it does not provide information for a better understanding and a plane created by three points (top of maxillary tubercles and incisive papilla does not represent the entire dentition if you refer to the occlusal plane)

* Line55/p6: the palate might be smooth on the plastic model, however in in vivo it is not…revise this sentence otherwise one could get the impression that it was concluded by Patzelt et al., in fact only the stitching part was from Patzelt

* Line 10-19/p7: IQR values should be stated in the results section (at least for the first time)!

* Line 24-35/p7: ref. No 30: please state if this study was conducted in vivo or vitro….if it was in vivo you might conclude as in line 33/p7, if not, then you should make clinical recommendation for satisfactory results as you evaluated the trueness in in vitro or provide other ref

* Line32/p8: I would add that the findings are limited to in-vitro and need to be verified in vivo and thus: e.g. …in edentulous regions in vitro.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
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No

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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