Reviewer's report

Title: Stress on facial skin of Class III subjects during maxillary protraction: a Finite Element Analysis

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Reviewer: Marco Tallarico

Reviewer's report:

Dear author, I read the manuscript entitled "Stress on facial skin of Class III subjects during maxillary protraction: a Finite Element Analysis". The manuscript is well written. Nevertheless, I suggest some corrections that may improve overall quality.

Abstract

- In the Background section, authors reported the aim of the manuscript. Please modify according to the journal guidelines.

- "to analyze tension loads produced by two different facial mask (FM) designs on Class III subjects' facial skin" SHOULD BE "to analyze tension loads produced by two different facial mask (FM) designs on Subjects with skeletal Class III"

Background section should be Introduction. Please check journal guidelines.

- Page 2 line 1
  (FM) Authors report FM for both face mask and facial mask. Please use only one term in all the manuscript.

- Page 2 lines 41-46
  I suggest to delete the follow sentence "However, no data are available in literature about the effects of tensile forces on facial skin areas contacted by the forehead and chin device's cups."

Methods

- Page 3 line 39
  ANSYS software. Authors reported 2 different versions. Please check.

Results

- Page 4 lines 26-27
  "Table 1 showed resulting tensions reported in kPa (kiloPascal)." It could be deleted
Discussion

"Several factors play a substantial role in terms of efficacy and effectiveness of orthopedic Class III treatment. Franchi et al.16 identified good and bad responders to early treatment considering some dento-skeletal predictive variables. Beyond the individual skeletal pattern, other variables regarding treatment management such as protraction device adaptation, patients' compliance, and device wear-time17-20 have to be considered for effectiveness and long-term stability" IT SHOULD BE "Several factors play a substantial role in terms of efficacy and effectiveness of orthopedic Class III treatment, including individual skeletal pattern, protraction device adaptation, patients' compliance, and device wear-time16-20."

"Hence, the aim of the present investigation was to analyze the skin stresses during maxillary protraction by means of FEA." Please delete.

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?
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

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Quality of written English
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