Reviewer's report

Title: Do Skeletal Characteristics of Occlusion Correlate with Condylar Volume?

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Reviewer: armando SILVESTRINI BIAVATI

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- Minor Essential Revisions

Thank you for submitting a wonderful manuscript. This study aims to evaluate the relationships among skeletal cephalometric characteristics and condylar volume, surface and shape, studied by means of CBCT. The Authors have made a remarkable work.

Here I have offered a few suggestions that may help strengthen your publication.

1) Title: “Do Skeletal Characteristics of Occlusion Correlate with Condylar Volume?”

I think it may be better: “Do skeletal cephalometric characteristics correlate with condylar volume, surface and shape? A 3D analysis”.

2) The sample; 1st paragraph

The 3-D CBCT scans of 188 temporo-mandibular joints (TMJ) in 94 Caucasian young adults subjects (46 females and 48 males; mean age 24.3 ± 6.5 years), who did not show pain or dysfunction of TMJ (Tecco S et al. 2011) whose condylar morphology appeared reasonably normal, which was evaluated by a public clinic of head and facial medicine, were retrospectively examined.

This phrase is to be rewritten. It’s too long, too many commas.

3) The sample; 5th paragraph

Subjects were considered in skeletal class I if ANB angle ranged between 80° and 84°, : this is wrong, please correct

4) Method error analysis; 2nd paragraph

I would eliminate table I, adding corresponding error data in the text

5) Discussion; 1st paragraph

In this study we only included the data of young adult subjects within a limited age range (specify range exactly).

specify range exactly

6) Discussion; 4th paragraph
Condylar growth studies in humans using metallic implants have shown that, during the prepubertal or juvenile growth period, mandibular growth takes place at variable rates. Because of the increased intensity of condylar growth during the pubertal growth spurt, the pubertal growth spurt is generally considered to be the best time for orthodontic (I will add functional) treatment in patients with Class II malocclusions (Bjork A. 1963; Bjork A Skieller V 1972; Bjork A, Skieller V 1976).

7) discussion; 13th paragraph
7) In a study with twenty-five subjects were submitted to hard diets, soft diets, or alternatively hard and soft diets, the condylar width was significantly greater within the hard diet group than. eliminate “in”

8) Conclusion; 2nd paragraph
Condylar size, both volume and surface, seems to correlate with the mandibular morphology, therefore influencing facial divergence and, at lower rate, skeletal class of a subject, mostly for the low mandibular angle subjects.
I will write (in) instead of “for”

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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