Iranian Journal of Radiology
Volume 20 · Issue 1 · e131641

OPEN PEER REVIEW

Correlation Between the Masticatory Muscle Dimensions and Internal Derangement of Temporomandibular Joints Based on Magnetic Resonance Imaging

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SUBMITTED	REVISED	ACCEPTED	DOI
18 Sep 2022	8 Jan 2023	10 Jan 2023	10.5812/iranjradiol-131641

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

3 comments · 10 Oct 2022 – 26 Oct 2022

Referee 1 Reviewer

MAJOR REVISION 10 Oct 2022

Thanks to the authors for their submission to the IJR.
Considering the scope of IJR, I think that this manuscript isn't appropriate for or interesting to our readers. It would be better to submit this manuscript to journals in the field of dentistry. Overall, this manuscript is appropriately designed, has a sufficient sample size, and is appropriately analyzed statistically. But it needs minor edits as follows:
Abstract
1. Method, line 15: The abbreviation DD should be deleted from before disc displacement.
2. Method, line 19: Rather than alpha=0.05, it should state that the significance level was set at alpha less than 0.05.
Full Text
3. Statistical analysis: First, descriptive measures should be added, such as the mean and standard deviation (SD) for continuous variables with a normal distribution, the median and interquartile range (IQR) for continuous variables with a non-normal distribution, and the number and percentage for qualitative variables.
4. Statistical analysis: A full description of the SPSS software should be added.
Tables
5. Table 1: The Min and Max columns should be deleted.
6. All numbers in the manuscript (in the text and tables) should be written with two or three decimal places.
7. Table 2: SD should be presented in parentheses alongside the mean in the mean column. Moreover, the Min and Max columns should be deleted, but a p-value column should be added, and three Tukey test pairwise comparisons should be presented for each row.
8. Tables 4 & 5 should be deleted.

Associate Editor

MINOR REVISION 26 Oct 2022

Dear authors;
Thank you for considering IJR for the submission of your research.
There are some points raised by the reviewers that must be considered and need reevaluation.
We will be happy to review your manuscript if it is revised based on the points mentioned.

Editor-in-Chief

MAJOR REVISION 26 Oct 2022

Dear authors,
Your article needs Major Revision.
Regards

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Reviewer 1:
the study has good design as differentiate internal derangement of Temporomandibular Joint in two category and also concluded normal patient.
However no clinical data is available about sign and symptoms of patients in this study , but studies could be design for evaluation of recurrence of TMJ internal derangement sign and symptoms according to muscular dimension.

In response to the reviewer 1:

With lots of thanks for your valuable comments and with respect to your suggestion ,we should mention that , we had access to the reception form and prescription from of all all of the patients . However , as our study was arranged based on MRI findings to evaluate whether there is relation between TMD and muscular dimensions and not clinical symptoms ,MRI of TMJ was reviewed by two separate radiologists trained in this filed and based MRI findings as the main core of the study and associated clinical findings the exclusion and inclusion criteria were conducted .However the main selection criteria was based on MRI. we assume that based on our study that proved relation between TMD and muscular dimension and also based on your idea we will try to arrange a new study after this article to focus on relation between clinical symptoms and TMD as well as Muscular dimensions' .

Reviewer 2:
Dear Associate editor,

Errors regarding the article are as follow:

1- Internal derangement (ID) of the TMJ must be defined in method section.

2- All masticator muscles must be evaluated in two conditions: open and close mouth with size measurements.

3- All masticator muscles must be evaluated in all imaging planes axial, coronal and sagittal with similar size measurement or must be evaluated all muscles in the same view with similar size measurement.

4- At least two experienced Radiologist in Head and Neck must evaluate the images.

1. With lots of thanks for your valuable comments As you kindly mentioned to fulfill your comment ,we made changes in the method to clarify the internet derangement definition .
2. The present study has been conducted with the sole purpose of evaluating the correlation between Internal derangement of tmj and the masticatory muscles dimensions at a section

which the maximum size of the muscles can be obtained, and it has been carried out in accordance with the background of research in this field and based on a complete review of obtained images and selection of the best section to be able to measure the maximum dimensions of target muscles. , In all of cases images were obtained in closed and open mouth positions to divide the samples into three groups: normal disc position, Disc displacement with reduction and Disc displacement without reduction in sagittal sections. However with respect to your suggestion we will try to overcome this limitation and in another study comparison of the each individual muscle dimension in open and close mouth can be conducted .

3. we tried our best to review all of the target muscles in different plans however as you know It is not possible to evaluate all the muscles with maximum size in same plane and also some sections such as coronal are prepared just in closed mouth position.
4. As the honorable referee pointed out, two radiologists evaluated all the images and measurements.

Reviewer 3:
Thanks to the authors for their submission to the IJR.
According to the scope of IJR, I think that this manuscript isn't appropriate and interesting for our readers. It is better that this manuscript to be submitted for dentistry field journals. Totally, this manuscript designed appropriately, has sufficient sample size, and statistically analyzed appropriately. But it needs minor editions as follows:
Abstract
1. Method, line 15: Abbreviation DD should be deleted from before of disc displacement.
2. Method, line 19: Rather than alpha=0.05, it should be written that, significance level considered alpha less than 0.05.
Full Text
3. Statistical analysis: Firstly, it should be added descriptive measures like as mean and standard deviation (SD) for continuous variables with normal distribution, or median and intra quartile rang (IQR) for continuous variables with non-normal distribution, and number and percentage for qualitative variables.
4. Statistical analysis: It should be added the full description of SPSS software.
Tables
5. Table 1: Min and Max column should be deleted.
6. All numbers of manuscript (in text and tables) should be written with two or three decimal number.
7. Table 2: SD should be presented along with mean column in the parenthesis. Moreover, Min and Max column should be deleted, but should be added p-value column and presented three Tukey test pairwise comparisons for each row.
8. Tables 4 & 5 should be deleted.

1 & 2.The authors gratefully thank to the Referee for the constructive comments.the mentioned items were done.

3.All the variables were of normal distribution, so the mean and the standard deviations (SD) are provided

4. SPSS version is 26.

5. As you kindly mentioned to fulfill your comment ,we made this change.

6.as your valuable comment the mentioned item was done.

7.with respect to your comment the mentioned change was done

8. With lots of thanks for your valuable comment and with respect to your suggestion We are pretty sure that removing table 4 and 5 will not make any sense, since one cannot reach the decision of conducting Pairwise Tukey analysis (Table 5) without conducting one-way ANOVA (Table 4).

2 Revision 1

4 comments · 13 Nov 2022 – 19 Nov 2022

Referee 2 Reviewer

REJECT 13 Nov 2022

Dear associate editor,

There is no homogeneous and standard measurement of the masticator muscles for accurate comparison in this study; consequently, the article is not suitable for publication in IJR.

Sincerely yours

Referee 1 Reviewer

MINOR REVISION 14 Nov 2022

Unfortunately, not all comments have been addressed appropriately.
As noted in comment number 7 of my first review, for Table 2, SD should be presented in parentheses in the mean column. Moreover, a column should be added to present the one-way ANOVA p-value, and a column should be added for the three Tukey test pairwise comparisons. If so, tables 4 & 5 can be deleted.

Associate Editor

MINOR REVISION 19 Nov 2022

Dear authors;

Some points raised by the reviewers remain unaddressed and must be considered and reevaluated.
We will be happy to review your manuscript if it is revised based on the mentioned points.

Editor-in-Chief

MINOR REVISION 19 Nov 2022

Dear authors,
Your article needs Minor Revision.
Regards

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Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

> Reviewers' Comments:

Unfortunately all comments not exerted appropriety.
According to my first time comment number 7, for Table 2: SD should be presented along with mean column in the parenthesis. Moreover, it should be added a column for presenting of one way ANOVA p-value; and so, it should be added a column for three Tukey test pairwise comparisons. If so, tables 4 & 5 can be deleted.

With lots of thanks for your valuable comments as you kindly mentioned,we made theses changes to fulfill your comment

3 Revision 2

3 comments · 10 Dec 2022 – 21 Dec 2022

Referee 1 Reviewer

ACCEPT 10 Dec 2022

Thanks to the authors for the appropriate revision.
Currently, this manuscript is acceptable from a methodological point of view.

Associate Editor

ACCEPT 15 Dec 2022

Dear authors,

I'm happy to announce that our reviewers have accepted your manuscript for publication in the Iranian Journal of Radiology.

Editor-in-Chief

MINOR REVISION 21 Dec 2022

Dear authors,
Your article needs Minor Revision.
Regards

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Revision 3

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Reviewer 1:
Thanks to the authors for appropriate revision.
Currently, this manuscript is acceptable according to methodology point of view.

The authors would like to thank the editor and the reviewers for their precious time and valuable comments

Reviewer 2:
This paper is suitable for publication in IJR.

The authors gratefully thank you for the valuable and constructive comments

Associate Editor 1:
Dear authors,

I'm happy to announce that our reviewers have accepted your manuscript to be published in the Iranian Journal of Radiology

The authors gratefully thank you for your precious time and valuable comments

Associate Editor 2:
131641
1-please add sequential numbers for titles and sub-titles of paper.
2-please avoid using full term after the abbreviation. For example, internal derangement (ID) in line 4 of abstract should be only: ID
3-please change P=0.000 to P<0.001
4-please add objective part to the p[aper according to journal format.
5-please change methods in abstract to patients and methods.
6-please change open closed to open and closed
7-in 256 x 256, please change alphabetic character of X to multiply symbol. [please correct all similar instances]
8-in T1 sagittal line 70, the authors mentioned: or both and right sides. Do they mean left and right sies?
9-please change "repetition time (msec)/echo time(msec)/number of excitations" to: "repetition time (TR)

(msec)/echo time (TE) (msec)/number of excitations (NEX)" then correct these parts as: TR/TE/NEX: 544/15/2 and TR/TE/NEX: 2210/14/2.
10- please correct: line 81: TMJ, line 81: 12 o'clock but, line 100 and 106 and figures 1 and 3 legends: sagittal, line 112 and 130: Pearson's correlation coefficient, Table 1 header of the column: Mean (SD), line 164: De Figueiredo Melke et al, our study, line 168: Melke et al did not, table 3: Pearson correlation coefficient, figure 2 legend: T1W,
11- please add the SPSS manufacturer data based on the IBM site [https://www.ibm.com/support/pages/how-cite-ibm-spss-statistics-or-earlier-versions-spss]

With lots of thanks for your valuable comments and with respect to your suggestion , As you kindly mentioned to fulfill your comment ,we made all changes.

4 Revision 3

1 comment · 10 Jan 2023

Editor-in-Chief

ACCEPT 10 Jan 2023

Dear authors,
Your article is acceptable for publication in IJR.
Regards