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OPEN PEER REVIEW

Correlation of Brain Magnetic Resonance Spectroscopy and Diffusion Tensor Imaging with the Severity of Clinical Symptoms in Fibromyalgia Patients

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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

2 comments · 31 Oct 2021 – 1 Dec 2021

Referee 1 Reviewer

MAJOR REVISION 31 Oct 2021

Thanks to the authors of the manuscript for their submission.
In terms of writing, the method section in particular is complete and clear, but there are major problems overall, the most important of which include:
1. Incompatibility of the study title with the purpose and results
2. Inconsistency between the results and the purpose of the study
3. The stated objective was to investigate change, but the study is cross-sectional, and this objective requires a cohort study
4. Different statistical tests are named in the statistical analysis section, but only results for the Spearman correlation coefficient and paired t-test or Wilcoxon rank test were presented.
5. Small sample size of the study
6. Inadequate presentation of statistical test results and failure to refer to the abbreviations below the tables

Editor-in-Chief

MAJOR REVISION 1 Dec 2021

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:

Q. Incompatibility of the study title with the purpose and results

R. Page 1, Line 2. Minor changes have been made to the title.

Q. Inconsistency between results and purpose of the study

R. Page 9, line 182-183 The inconsistency between the goal and the results has been fixed.

Q. In the goal, the change investigation was mentioned while the type of study is cross-sectional and this goal requires a cohort study

R. Page 2, line 42 This is a prospective study.

Q. Expressing the names of different statistical tests in the statistical analysis section; but, only Spearman correlation coefficient and paired t-test or Wilcoxon rank test results were presented.

R. Page 5, line 109-110 Insignificant results were not included in the article.

Q. Small sample size of the study

R. Page 8, line 180 This is stated in the limitations section.

Q. Inadequate presentation of statistical test results, and failure to refer to the abbreviations in below of tables

R. Page 12, line 214-218, Page 13, line 221-223 Additions were made to the descriptions of the tables and figures.

Reviewer 2:

Q. Data collection and results are appropriate. It is comparative with previous studies. However, figures and tables are not explained in proper radiologic details.

Add proper explanation to the figures and tables.

R. Page 9, line 188-189,

Page 10,line 193-194

Page 12, line 214-218, Page 13, line 221-223

Additions were made to the descriptions of the tables and figures.

Reviewer 3:

Q. Please check your English writing.

R. English writing is checked.

Dear Editör,

Thank you very much for taking the time to review our article. We've made all the changes you want.

Best regards

2 Revision 1

2 comments · 1 Jan 2022 – 1 Feb 2022

Referee 1 Reviewer

MINOR REVISION 1 Jan 2022

Thanks to the authors for their revisions.
Currently, this draft is relatively appropriate, but the term prospective must be deleted from all sections of the manuscript and replaced with cross-sectional.

Editor-in-Chief

MINOR REVISION 1 Feb 2022

Dear authors,
Your article needs Minor Revision.
Regards

3

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.

Reviewer 1:

Q: Please check English writing.

R: English writing is checked.

Q: I think it is be better to change the article's title this way: "Correlation between MRS, DTI,..." .

R: Changes have been made to the title. Page 1, Line 1

Reviewer 2:

Q. The term of prospective must be deleted from all sections of manuscript and cross-sectional terms replaced rather than it.

R. The term prospective was replaced by the term cross sectional throughout the article. Page 1, line 11, Page 2, line 42.

Dear Editör,

Thank you very much for taking the time to review our article. We've made all the changes you want.

Best regards

3 Revision 2

0 comments

No public comments in this round.

4

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:

Q: Please check English writing.

R: English writing is checked.

Q: I think it is be better to change the article's title this way: "Correlation between MRS, DTI,..." .

R: Changes have been made to the title. Page 1, Line 1

Reviewer 2:

Q. The term of prospective must be deleted from all sections of manuscript and cross-sectional terms replaced rather than it.

R. The term prospective was replaced by the term cross sectional throughout the article. Page 1, line 11, Page 2, line 42.

Dear Editör,

Thank you very much for taking the time to review our article. We've made all the changes you want.

Best regards

4 Revision 3

1 comment · 12 Apr 2022

Editor-in-Chief

MINOR REVISION 12 Apr 2022

Dear authors,
Your article needs Minor Revision.
Regards

5

Revision 4

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.

Associate Editor 2:

120514

1-the objective part of abstract is unclear: “The aim of this study was to investigate the change in clinical symptom severity with the fibromyalgia and apparent diffusion coefficient values and metabolites in the brain of fibromyalgia patients.” Please change it to a better sentence.

A: Changes have been made.Page 1, line 8-10

2-the word “inclued” is wrong.

A: Change has been made. Page 3 , line 48 .

3-please add full term of abbreviations in abstract and paper separately [for example; DT, FM, FIQ, …..]. in addition, please define abbreviation for the first time and then mention the abbreviation, not the full term.

A: Changes have been made.Page 1, line 12, 13, 26, 37.

4-in line 19, the authors mentioned: “…… and some metabolites in spectroscopy” in fact, it seems better to be written for example as: “……. and peak values of some metabolites in spectroscopy.” [please correct the part based on this approach]

A: Change has been made. Page 1 , line 19 .

5-the authors mentioned in conclusion: “The results of this study suggested that metabolites have an inhibitory or excitatory role and participate in the central pain mechanisms in FM, which is a chronic pain syndrome” this conclusion seems inappropriate as the study can not determine an inhibitory or excitatory role for metabolites. The findings show only association of MRS findings with clinical findings and severity; this association could not be interpreted

as a causality [inhibitory or excitatory effect]. I think the conclusion should be corrected based on study design.

A: Change has been made. Page 9 , line 186, 187 .

6-the objective is unclear: “The aim of this study was to investigate the change in clinical symptom severity with the FA and apparent diffusion coefficient (ADC) values and metabolites in the brain of FM patients.” It is better as: “The aim of this study was to investigate the correlation of clinical symptom severity with the FA and apparent diffusion coefficient (ADC) values and metabolites in the brain of FM patients.”

A: Change has been made. Page 2 , line 42, 43 .

7-please change the method to patients and methods.

A: Change has been made. Page 3 , line 46 .

8-in lines 84 and 85, please change short and long to short echo and long echo.

A: Change has been made. Page 4 , line 88, 89 .

9-in line 85, please change “guide volume selection” to “guiding volume selection”

A: Change has been made. Page 4 , line 90.

10-in line 97, Ch0/Cr should be Cho/Cr

A: Change has been made. Page 5 , line 102 .

11-in line 98, figüre should be figüre

A: Change has been made. Page 5 , line 103 .

12-in line 99, IBM SPSS vn. 20 software should be IBM SPSS ver. 20 software. in addition, please add data of SPSS manufacturer using IBM site.

A: Change has been made. Page 5 , line 104 .

3-strongcorrelation refers to r values greater than 0.8. the value 0.7 is good correlation.

A: Change has been made. Page 6 , line 120 .

14-p=0.000 should be p<0.001.

A: Change has been made. Page 6 , line 133 .

15-please add this legend for “table 1: Statistically Significant Correlation coefficients of VAS with MRS metabolites values” the current explanation should be the footnote of table.

A: Change has been made. Page 13 , line 219, 221.

16-please add full term of abbreviations in tables [including their legends] as footnote of tables.

A: Change has been made. Page13 , line 226-231, pag 15, line 236-240 .

17-this part of table 2 legend should be mentioned as footnote of table: “A statistically significant difference was found between the mean values of the NAA/cr, Glu/cr, NAA, Cho, Glu, and ADC value of the left and right thalamus.”

A: Change has been made. Page 15 , line 234-235 .

18-please hide the patients’ names on the figures.

A:Change has been made. Page 10, 11, 12.

5 Revision 4

1 comment · 19 Jun 2022

Editor-in-Chief

MINOR REVISION 19 Jun 2022

Dear authors,
Your article needs Minor Revision.
Regards

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Revision 5

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.

Associate Editor 1:

1-there are no data of SPSS manufacturer. please add the data based on IBM site.

A: Change has been made. Page 5, line 104-105

2-some abbreviations are not consistent, for example: trFA: right thalamus fractional anisotropy, ikprADC: right internal capsule posterior leg apparent diffusion coefficient, trADC: right thalamus apparent diffusion coefficient and ikprFA: right internal capsule posterior leg fractional anisotropy. please correct.

A: Changes have been made. Page 13, line 230, Page 15, line 237, 238,239

3-it seems posterior leg in: "internal capsule posterior leg" should be limb [instead of leg]

A: Change has been made. Page 13, line 230, Page 15, line 238

6 Revision 5

1 comment · 25 Jun 2022

Editor-in-Chief

ACCEPT 25 Jun 2022

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