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OPEN PEER REVIEW

Liver Fibrosis Assessment Using Transient Elastography by FibroScan and Shear Wave Elastography by Sonography: A Comparative Cross-sectional Study in an Outpatient Liver Clinic

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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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Contents

1 **Original submission** Referee 1, Mohammad Reza Babaei, Associate Editor, Editor-in-Chief 2
2 **Revision 1** Referee 1, Associate Editor, Editor-in-Chief 4
Authors' reply to reviewers 5
Reviewer and editor comments 7
3 **Revision 2** Associate Editor, Editor-in-Chief 8
Authors' reply to reviewers 9
Reviewer and editor comments 10
4 **Revision 3** Editor-in-Chief 11
Authors' reply to reviewers 12
Reviewer and editor comments 14

1 Original submission

4 comments · 14 Jan 2021 – 30 Mar 2021

Referee 1 Reviewer

MAJOR REVISION 14 Jan 2021

Although the authors of the current manuscript try to conduct a high-quality study, from a methodological point of view, it is necessary to pay attention to the following points when revising:
1. It should be written according to the IJR guidelines.
2. In the methods section of the abstract, inclusion and exclusion criteria, studied variables, and statistical methods should be mentioned.
3. In the results sections of the abstract and full text, the presentation of the findings is not appropriate; when measuring agreement between two methods for each outcome, the strength of agreement between methods should be measured using a standard correlation coefficient classification (weak, medium, good, and excellent).
4. The ethical approval code for the study must be added to the second paragraph of the methods section.
5. In the statistical analysis section, it is mentioned that "Different variables were compared among the groups using the Chi-square test for qualitative variables (male vs. female) and the Independent t-test or Wilcoxon rank-sum test for quantitative variables (BMI < 30 vs. BMI ≥ 30)." The nonparametric equivalent of the independent t-test is the Mann-Whitney test, not the Wilcoxon test, which must be corrected in both the text and the footnote of Table 3.
5. There is complete statistical agreement between the p-value and the 95% confidence interval, and one of them should be reported, the latter being usually preferable.
6. The statement "Gender, age, and BMI did not affect the results, except for BMI that was correlated with CAP (p-value: 0.005)" must be explained more clearly; moreover, when the significance level is greater than 0.05, this does not mean that there is no relationship between the two variables, but it can be said that no statistically significant relationship was seen.
7. The purpose of this study was to compare methods, but why were comparisons in Table 3 made within each method based on gender and BMI?

Mohammad Reza Babaei Reviewer

ACCEPT 15 Mar 2021

Hi
Good job. Excellent!

Associate Editor

REJECT 29 Mar 2021

Dear author
Thank you for submitting your manuscript to the Iranian Journal of Radiology. With regret, the manuscript was not found interesting enough for publication.
There were several methodological issues, as mentioned by the methodological reviewer.
Line 70: it seems that 25-65 mm, not cm, is correct.
The results section is brief and not detailed, and is not informative.
Table 2 is not clear, and the fibrosis stage determined by SWE is not mentioned.
Best regards

Editor-in-Chief MAJOR REVISION 30 Mar 2021

Dear authors,
Your article is not acceptable in this format. Any decision depends on your reply to the referee and on a Major Revision.
Regards

2

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.

The authors thank reviewers for their valuable and constructive comments and suggestions. A point-by-point response to reviewers was provided below. The changes were marked in yellow in the main text.

Reviewer 1:

Although the authors of current manuscript try to do a high-quality study; but according to methodological point of view, it should be said that it is necessary to pay attention to the following points for editing:

1. It should be written according to the IJR guidelines.

Reply: The authors checked the manuscript and tried to follow the IJR guidelines.

2. In the method abstract section, inclusion and exclusion criteria, studied variables and statistical methods should be mentioned.

Reply: More information was added to the Abstract/ Materials and methods

3. In the abstract and full-text results, writing the findings are not appropriate; in the case of measuring agreement between two methods for each outcome, the strength of agreement between methods should be measured using standard correlation coefficient classification (weak, medium, good, and excellent).

Reply: Fibrosis staging tools, TE and SWE, yielded excellently correlated measurements CAP and B-mode ratio was moderately correlated regarding the steatosis grade. This information was added to the result section of the abstract and main text.

4. Ethical approval code of study must be added to the second paragraph of method.

Reply: This study was approved by Faculty Research Ethics Committee of Shiraz University of Medical Scinces with the ethical code of IR.sums.med.rec.1397.454. It was added to the second paragraph of the method section.

5. In statistical analysis section, it mentioned that "Different variables were compared among the groups using the Chi-square test for qualitative variables (male vs. female) and the Independent t-test or Wilcoxon rank-sum test for quantitative variables (BMI < 30 vs. BMI ≥ 30).": The nonparametric equivalent of the independent t-test is the Mann-Whitney test, not the Wilcoxon test, which it must be corrected in both the text and footnote of Table 3.

Reply: Thanks a lot for the notification. Our student declared that it was a misspelling during the google search when she wanted to find the Whitney test's full name on the internet. It is corrected in the whole text.

5. There is a statistically complete agreement between the p-value and the 95% confidence interval, and one of them should be reported, the latter being usually preferable.

Reply: P-values were omitted in the text of the result section.

6. It must be more clearly explained about "Gender, age, and BMI did not affect the results, except for BMI that was correlated with CAP (p-value: 0.005)"; moreover, when the value of the significance level is greater than 0.05, this does not mean that there is no relationship between the two variables, but it can be said that no statistically significant relationship was seen.

Reply: *the sentence corrected as “There was no statistical correlation between other variables (i.e. Gender, age, and BMI) and different staging tools (p-value >0.05). However, a mild correlation was seen between BMI and CAP (p-value: 0.005)”*

7. The purpose of this study was to compare methods, but why in Table 3, comparisons were made within each method based on gender and BMI?

Reply: *At the end of the introduction section, it was described that “In this paper, we studied the concordance between different tools in measuring liver fibrosis (TE vs. SWE) and hepatosteatosis (CAP vs. B-mode ratio); also, we aimed to determine the effect of demographic variables on the measurements amongst patients who were referred to the liver clinic of our University-affiliated center.”. The results of concordance between different tools in measuring liver fibrosis and hepatosteatosis were mentioned in the text of the result section, and the results of the effect of demographic variables on the measurements were shown in table 3.*

Associate Editor 1:
Line 70: it seems that 25-65 mm, not cm is correct.

Reply: *thank you for the notification. It was corrected.*

The result section is brief and not detailed and is not informative.

Reply: *More information was added to the result section according to the suggestion of dear reviewer.*

Table2 is not clear.

Reply: *Table 2 was simplified to be more precise.*

2 Revision 1

3 comments · 24 Apr 2021 – 5 Jun 2021

Referee 1 Reviewer

ACCEPT 24 Apr 2021

Thanks to the dear authors for addressing the comment in the manuscript. Currently, this manuscript is methodologically acceptable and ready for publication.

Associate Editor

MINOR REVISION 4 Jun 2021

I want to thank the authors as they addressed most of the issues that the reviewer(s) suggested. I wish to recommend a few minor revisions as presented:
1-Line 20: "respectively" should be added at the end of the sentence.
2-In the abstract conclusion section, line 22, the sentence "This was also true for CAP and B-mode hepato-renal ratio for grading of hepatosteatosis" should be corrected. In the previous sentence about fibrosis, the correlation was excellent, but it was good for hepatosteatosis, and the description of the correlation as excellent does not apply to both.
3-In the second paragraph of the method section, ethical issues are separated by exclusion criteria. Please group all matters concerning ethical issues together and then mention exclusion criteria.
4-Please add limitations of this work at the end of the manuscript, including the lack of the gold standard.

Editor-in-Chief

MINOR REVISION 5 Jun 2021

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.

The authors thank the dear editor for precise corrections. A point-by-point response was provided below. The changes were marked in yellow in the main text.

1-line 20 "respectively should be added at the end of the sentence.
Reply: "Respectively" was added to the text.

2-In abstract conclusion section line 22, the sentence "This was also true for CAP and B-mode hepato-renal ratio for grading of hepatosteatosis" should be corrected. In the previous sentence about fibrosis, the correlation was excellent, but it was good for hepatosteatosis, and excellent correlation is not valid for both.
Reply: It was corrected as "CAP, and B-mode hepato-renal ratio was moderately correlated regarding grading of hepatosteatosis."

3-In the second paragraph of the method, ethical issues are separated by exclusion criteria. Please put together all matters about ethical issues and then mention exclusion criteria.
Reply: It was corrected as "It should be mentioned that written consent was obtained from each participant before they participated in the study. The study was conducted following the Declaration of Helsinki, and the University Ethics Committee approved the protocol with ethical code of IR.sums.med.rec.1397.454. Patients with sonographic features of cirrhosis (irregular liver surface and lobar redistribution), multiple hepatic masses, moderate to large ascites, and those who were not cooperative for performing the test optimally were excluded."

4-please add limitations of this work at the end of the manuscript, including lack of the gold standard.
Reply: The limitation was added as "The limitation of this study was the lack of histopathology results of liver biopsy, to use it as a gold standard and compare the results with it."

3 Revision 2

2 comments · 10 Jul 2021 – 15 Sep 2021

Associate Editor

ACCEPT 10 Jul 2021

Dear author
Thank you for making the requested changes. The manuscript could be accepted.
Best regards

Editor-in-Chief

MINOR REVISION 15 Sep 2021

Dear authors,
Your article needs Minor Revision.
Regards

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.

The authors thank the dear reviewer and editor for precise corrections. A point-by-point response was provided below. The changes were marked in yellow in the main text.

Reviewers' Comments:
Reviewer 1:
1.Objectives should be added in the abstract and the text of the article.
Reply: Objectives were added to both abstracts and main text.

2.In Figure 1, specify A and B.
Reply: They were specified.

Associate Editor's Comments:
Associate Editor 2:
1-Abstract needs background and objective parts.
Reply: Objectives were added to both abstracts and main text.

2- please correct this sentence in result section of abstract: “fibrosis and steatosis tools were excellently and moderately correlated by the tested modalities, respectively [r: 0.9538, 95% confidence interval [CI]: 0.9252-0.9717, p-value < 0.0001 and r = 0.429, 95% CI: 0.2048-0.6104, p-value < 0.0001; respectively)”
Reply: Thanks for the notification. It was corrected.

3-in line 21, it is better to replace with instead of for [strong correlation with fibrosis staging]
Reply: It was replaced.

4-this sentence is unclear. please rephrase it: “Chronic liver disease is a spectrum, from a persistent insult from a broad variety of etiologies that mirrors the extent and outcome of hepatic fibrosis caused by offending etiology.”
Reply: Thanks for the notification. It was replaced by “Chronic liver disease has a wide variety of etiologies and leads to hepatic fibrosis.”

5-please add objective part to the paper before method section.
Reply: It was added.

6-please add sequential numbers to titles and sub-titles: 1-background. 2-objectives. 3-patients and methods. 3-1-participants. ……
Reply: It was added.

7-please correct: “The study was conducted based on the Declaration of Helsinki,”
Reply: It was corrected.

8-in line 83, please correct the word lever to liver.
Reply: It was corrected.

9-in table n1 legend, it is better to write demographic data.
Reply: It was corrected.

10-please correct table 3 legend: “Comparison of different measurements in different subgroups determined based on gender and BMI”
Reply: It was corrected.

11-please annotate in figure 2 legend that the red numbers in graphs are pearson correlation coefficients.
Reply: It was added to figure legend.

12-please correct in line 173: “ …… is faced with …….”
Reply: It was corrected.

13-please delete subtitle Conclusion:
Reply: It was deleted.

14-in figure 1, please add A on fibrosis part and B on steatosis part.
Reply: It was added.

4 Revision 3

1 comment · 19 Sep 2021

Editor-in-Chief

ACCEPT 19 Sep 2021

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