Dear editor:

On behalf of my co-authors, we thank you very much for giving us an opportunity to revise our manuscript. We appreciate all editors and reviewers very much for their positive and constructive comments and suggestions on our manuscript entitled" **Atherogenic index of plasma combined waist circumference and body mass index to predict metabolic-associated fatty liver disease**" (Manuscript ID: 78423). These comments are all valuable and very helpful for improving our paper. All the authors have studied the comments carefully and revised the manuscript based on them.

In this revised version, we have addressed the concerns of the reviewers. A point-by-point response to the reviewer's comments was enclosed, and the revision of the manuscript was marked. Meanwhile, we have revised and improved the relevant figures, tables, and research highlights according to the company editor-in-chief's suggestions and the journal's requirements. Then, English language expert Liang JT was invited to revise the English language of this manuscript.

We hope that these revisions successfully address your concerns and requirements and that this manuscript will be accepted.

Looking forward to hearing from you soon.

Best wishes,

Shukun Yao

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors:

Comment 1:

AIP value showed non-homogeneous distribution in this study. It should be given as the median (range). However, some data, such as SUA, showed homogeneous distribution. They should be presented as mean ± SD. Authors should reconsider statistical tests.

Response:

We are very grateful for your suggestion, and we have re-performed the statistical analysis with an independent samples t test for approximately normally distributed data such as age, WC, BMI, and SUA, and presented as mean ± SD. Then, we conducted Mann–Whitney U test for AIP, and presented them as medians and quartiles. The relevant statistical results have been updated in Table 1 and Table 6 (In 78423-Table-File-revision, highlighted in yellow).

Comment 2:

It is unclear whether hyperlipidemia and diabetic patients were excluded from the study.

Response:

Thank you for your suggestion and question, we are very sorry for not elaborating clearly on the inclusion criteria of subjects and the diagnostic criteria of MAFLD. In this study, the criteria for diagnosing MAFLD are based on evidence of hepatic steatosis in the presence of one or more of overweight/obesity, type 2 diabetes, or metabolic dysregulation that includes dyslipidemia, dysglycemia or specific drug treatment and so on. Therefore, patients with hyperlipidemia and diabetes were not excluded from this study, and may be included when they combined with hepatic steatosis. In the revised manuscript, we have added the diagnostic criteria for MAFLD in detail in the materials and methods section (Page 7, highlighted in yellow), hoping to help you better understand this study.

Comment 3:

It should be stated whether there is a use of lipid-lowering drugs or drugs that affect lipid metabolism.

Response:

Thanks for your valuable suggestion. Based on the response to the previous comment, we have added a detailed description to the criteria for metabolic disorders in the diagnostic criteria for MAFLD, and the subjects included in this study may received lipid-lowering drugs or drugs that affect lipid metabolism. We have added clarifications to the materials and methods section (Page 7, highlighted in yellow) to help you better understand this study.

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Minor revision

Specific Comments to Authors: This study aims to use atherogenic index of plasma (AIP) combined with waist circumference (WC) and body mass index (BMI) to predict metabolically associated fatty liver disease (MAFLD) in obesity patients. The results showed that AIP was as good as other predictors such as WC and BMI, and it was even better to combined with these two factors. The MAFLD diagnosis was completed with MRI as the diagnostic gold standard. Overall, it was a well written and designed study, however, the result was not surprised since these three factors were all demonstrated to be associated other morbidities of obesity. There were few points needed to be clarified:

Comment 1:

Would it possible to provide a cut point of AIP to suggest that the patient with this AIP or above may have a higher risk of MAFLD and we need to pay more attention of the liver condition?

Response:

Thanks for your precious advice. According to the results in Table 4, we supplemented in the results section (Page 10, highlighted in yellow) that the best cutoff values for AIP to predict MAFLD in males and females were 0.0821 and -0.1390, respectively. At the same time, we also supplemented in the discussion section (Page 13, highlighted in yellow) that this result provided a new idea for early prevention of MAFLD. People with AIP levels above this cutoff point may be at higher risk for MAFLD and require more attention to liver conditions.

Comment 2:

The author developed a A-W-B model (The regression equation was logit (A-W-B) =-8.782+2.560*AIP+0.049*WC+0.170*BMI) to predict MAFLD, but it was not clear how to use it in clinic?

Response:

Thanks for your suggestion and question, and sorry for not explaining in detail how to use the A-W-B model in clinic. Actually, the A-W-B model developed in this study can be regarded as a new predictor combining AIP, WC, and BMI, calculated by -8.782+2.560*AIP+0.049*WC+0.170*BMI. To better understand its clinical application, we have supplemented in the results section of the abstract (Page 3-4, highlighted in yellow) and main text (Page 11, highlighted in yellow) that the optimal cutoff values of A-W-B for predicting MAFLD in males and females were 0.5932 and 0.4105, respectively, and illustrated in the discussion section (Page 15, highlighted in yellow) that it will facilitate early clinical identification of MAFLD in different gender populations. When the A-W-B level of the subject is above the cutoff point, it can be preliminarily identified as MAFLD. We hope that these modifications will help you better understand the clinical utility of the A-W-B model.

Comment 3:

MAFLD was commonly clinically diagnosed by abdominal ultrasonography, not MRI. The degree of fatty change of liver by ultrasonography could be divided as mild, moderate and severe, but this difference was not mentioned in the draft. Were there any relationships between AIP, A-W-B model and the severity of fatty change by ultrasonography?

Response:

Thanks for your suggestion and question. MAFLD was commonly clinically diagnosed by abdominal ultrasonography, but due to the low sensitivity of ultrasound for mild fatty liver[1], we did not use ultrasound to accurately classify the severity of MAFLD in the training set of this study. Therefore, we are very sorry that the relationship between AIP, A-W-B model and the severity of fatty liver by ultrasonography is unclear. We have supplemented this limitation in the last paragraph of discussion section (page 16, highlighted in yellow) and hope to further explore the predictive value of AIP and A-W-B for different severities of MAFLD in the future. We hope that these revisions could address your concerns on this manuscript.

Thank you again sincerely!

EDITORIAL OFFICE'S COMMENTS

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) Science editor:

The manuscript has been peer-reviewed, and it' s ready for the first decision.
Language Quality: Grade B (Minor language polishing)
Scientific Quality: Grade C (Good)

Response:

Thanks for your suggestion, we have revised the manuscript point-by-point according to the comments of the reviewers.

(2) Company editor-in-chief:

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Gastroenterology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content. Please check and confirm whether the

figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2022. Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: https://www.referencecitationanalysis.com/.

Response:

Thanks for your valuable suggestions, we have revised the manuscript point-by-point according to the comments of the reviewers, as well as revised and improved the relevant figures, tables, and research highlights according to your suggestions and the journal's requirements. Then, English language expert Liang JT was invited to revise the English language of this manuscript. We hope that these revisions successfully address your concerns and requirements and that this manuscript will be accepted.

Thank you again sincerely!

Reference

1. Ferraioli G, Soares Monteiro LB. Ultrasound-based techniques for the diagnosis of liver steatosis. World J Gastroenterol. 2019;25(40):6053-62. doi:10.3748/wjg.v25.i40.6053.