Manuscript entitled: "Comparison of point and two-dimensional shear wave elastography of the spleen in healthy subjects"

Dear Editor,

Thank you for your valuable feedback and the comments of the reviewers. We have provided point-by-point responses to the suggestions and comments.

We feel that the manuscript has highly profited by addressing the reviewers comments, and it is now much more concise.

We would be very pleased if you considered this manuscript suitable for publication in *World Journal of Radiology*.

Looking forward to hearing from you;

Sincerely,
Prof. Dr. Wolfgang Kratzer, MD

Point by Point-Statement

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Reviewer #1:

Spleen stiffness as a tool predicting portal hypertension has been recently studied (1). There was attempt to evaluate reference range of splenic stiffness in healthy subjects (2, 3). However; none of the studies compared splenic stiffness using different methods. The current article shows non-significant correlation between the point and two-dimensional shear wave elastography (p-SWE and 2D-SWE) of spleen using different devices in normal healthy volunteers. Moreover, the splenic stiffness from different splenic poles were compared in this study.

Reviewer's comment

My comments

1. The major limitation of this study was the reliability of SWE value due to low number of measurement. Moreover, the inter-investigator agreement should be demonstrated. Previous studies showed that the interobserver agreement was excellent: 0.847-0.87 (4, 5)

   Answer: We agree with the reviewer that a larger number of SWE values would have been desirable. We have added this into the Limitation section. Thank you also for the hint with the inter-observer agreement. We have added a sentence with the details of inter-observer reliability.

2. Underlying liver disease, skin thickness and splenic size may effect splenic stiffness (2). Please clarify the definition of hepatopathies in your study and present the data of spleen size in baseline characteristics.

   Answer: Definition and information about hepatopathies (viral hepatides, hemacromatosis, autoimmune hepatitis, toxic hepatides, Wilson's disease) were added. Rare hepatopathies which can only be confirmed histologically could not be excluded.

   Thank you for the important hint. Information on the spleen size of the study collective has been added to the characteristics. Thank you.

3. The limitation of tests such as the number of unsuccessful measurements should be clarified. In general, it was reported in about 2.8%.(6)

   Answer: No information on unsuccessful measurements was collected during the study. Due to the fact that the subjects were young people with an average age of 27.93 ± 8.13 years and an average BMI of 22.56 ± 2.57, it can be assumed that the number of failed measurements is a little lower than in the study by Petzold G et al.

4. Previous studies showed reliable performance of both p-SWE and 2D-SWE in assessment of liver fibrosis (7). The explanation of unrelated splenic stiffness between two methods should be explained in discussion.

   Answer: We agree with the reviewer that for patients with chronic hepatatis C virus infection, a good agreement of p-SWE and 2D-SWE was found for patients with F2-F4 fibrosis. (7) Bâldea V, Lupușoru R, Dănilă M, Șirli R, Popescu A, Sporea I. Comparison between the performance of Two-Dimensional and Point Shear Wave elastography for the noninvasive assessment of liver cirrhosis. Ultrasound in Medicine and Biology. 2019;45:S119. However, the values showed significant differences between the two methods 2D-SWE 12.1 kPa, p-SWE 10.4 kPa.

References

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2. Cho YS, Lim S, Kim Y, Sohn JH, Jeong JY. Spleen Stiffness Measurement Using 2-Dimensional Shear Wave Elastography: The Predictors of Measurability and the Normal Spleen Stiffness Value. Journal of Ultrasound in Medicine. 2019;38(2):423-31.
3. Giuffrè M, Macor D, Masutti F, Abazia C, Tinè F, Patti R, et al. Evaluation of spleen stiffness in healthy volunteers using point shear wave elastography. Annals of hepatology. 2019;18(5):736-41.
4. Serra C, Grasso V, Conti F, Felicani C, Mazzotta E, Lenzi M, et al. A New Two-Dimensional Shear Wave Elastography for Noninvasive Assessment of Liver Fibrosis in Healthy Subjects and in Patients with Chronic Liver Disease. Ultraschall in der Medizin (Stuttgart, Germany : 1980). 2018;39(4):432-9.
5. Fang C, Konstantatou E, Romanos O, Yusuf GT, Quinlan DJ, Sidhu PS. Reproducibility of 2-Dimensional Shear Wave Elastography Assessment of the Liver: A Direct Comparison With Point Shear Wave Elastography in Healthy Volunteers. Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine. 2017;36(8):1563-9.
6. Petzold G, Hofer J, Ellenrieder V, Neesse A, Kunsch S. Liver Stiffness Measured by 2-Dimensional Shear Wave Elastography: Prospective Evaluation of Healthy Volunteers and Patients With Liver Cirrhosis. Journal of ultrasound in medicine : official journal of the American Institute of Ultrasound in Medicine. 2019;38(7):1769-77.
7. Bâldea V, Lupușoru R, Dănilă M, Șirli R, Popescu A, Sporea I. Comparison between the performance of Two-Dimensional and Point Shear Wave elastography for the noninvasive assessment of liver cirrhosis. Ultrasound in Medicine and Biology. 2019;45:S119.

(1) Science editor:

1 Scientific quality: The manuscript describes a retrospective study of the comparison of point and two-dimensional shear wave elastography of the spleen in healthy subjects. The topic is within the scope of the WJG. (1) Classification: Grade C; (2) Summary of the Peer-Review Report: The current article shows non-significant correlation between the point and two-dimensional shear wave elastography of spleen using different devices in normal healthy volunteers. Moreover, the splenic stiffness from different splenic poles were compared in this study. The questions raised by the reviewers should be answered; (3) Format: There are 4 tables and 3 figures; (4) References: A total of 43 references are cited, including 21 references published in the last 3 years; (5) Self-cited references: There are 3 self-cited references. The self-referencing rates should be less than 10%. Please keep the reasonable self-citations (i.e. those that are most closely related to the topic of the manuscript) and remove all other improper self-citations. If the authors fail to address the critical issue of self-citation, the editing process of this manuscript will be terminated; and (6) References recommendations: The authors have the right to refuse to cite improper references recommended by the peer reviewer(s), especially references published by the peer reviewer(s) him/herself (themselves). If the authors find the peer reviewer(s) request for the authors to cite improper references published by him/herself (themselves), please send the peer reviewer's ID number to editorialoffice@wjgnet.com. The Editorial Office will close and remove the peer reviewer from the F6Publishing system immediately. 2 Language evaluation: Classification: Grade B. 3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, the Institutional Review Board Approval Form, and the written informed consent. No academic misconduct was found in the Bing search. 4 Supplementary comments: This is an unsolicited manuscript. No financial support was obtained for the study. The topic has not previously been published in the WJG.

5 Issues raised:

(1) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor;

Answer: Thank you for the note. We have uploaded the figures as PowerPoint files.

(2) The "Article Highlights" section is missing. Please add the "Article Highlights" section at the end of the main text. 6 Recommendation: Conditional acceptance.

Answer: As suggested by the Science Editor we have added article highlights at the end of the main text.