

Dear Editors and Reviewers,

Thank you for the comments concerning our manuscript entitled “Ultrasound finding in autoimmune hepatitis” (ID 38081). The comments have been important and helpful to improve our paper.

Please find the revision of our manuscript according to the comments and a point-to-point reply below. We highlighted the changes to our manuscript by using the track changes mode in MS Word.

We are hoping that after careful revision our paper deserves publication in WJG.

With Best Regards!

Prof. Dr. Christoph F. Dietrich  
Corresponding author

### **Reviewers 1:**

1. Your manuscript is a minireview on AIH (classification, pathogenesis, clinical manifestations, diagnosis, etc.) from page 4 to page 8 (5 pages) and even a mini-mini-review on ultrasound findings in AIH from page 9 to page 12 (4 pages). I must confess that I enjoyed reading the first part on AIH, it is well written from classification to treatment. However, this part is not the objective of the review. It is too long and I suggest to make it shorter (please, cut off some paragraphs from clinical manifestations, and from non-invasive markers of liver fibrosis, simply because none of us will use AAR, AARPRI, APRI to detect early stages of liver fibrosis in AIH patients!).

We are thankful for the kind words. Since ultrasound findings in AIH have not been reported systematically so far. No characteristic imaging features of AIH have been described. So the part of ultrasound findings will be mini-mini. We cut off certain parts of AAR, AARPRI AND APRI according to reviewer's suggestion.

2. Page 11, first paragraph, last two lines should be deleted (relation between TE and BMI is well known).

Done

3. ARFI: I would not mention the study by Righi (2 patients with AIH!!) and also the last line may be deleted (well known!).

Done

4. You should mention the limitation of your review.

We are thankful for the kind words. The limitation of our review was added.

5. Fig. 4 may be deleted because in none of the methods (Fibroscan, ARFI, SWE) showed imaging feature of AIH.

Done

6. There are few spelling errors; please, make corrections.

We are thankful for the kind words. We checked and corrected the spelling errors in our revised paper.

7. Please, read carefully the Format for references and make corrections.

We are thankful for the kind words. We checked and corrected the format of references in our revised paper.

## **Reviewers 2:**

1. AIH is a relatively rare disease in Asia. The diagnosis mainly is relied on scoring system and liver biopsy. Ultrasound do not have an important role on diagnosis.

We are thankful for the kind words. Although current ultrasound imaging methods for the evaluation of liver fibrosis in AIH cannot replace liver biopsy, ultrasound especially elastography could reflects the stages of liver fibrosis, and correlates better than non-invasive laboratory markers in patients with treated AIH.

2. US based elastography may be useful in monitoring liver fibrosis in AIH. However, this review revealed that the data in the literatures were quite rare. We need more information to develop cutoff value especially in Asian. It will be more appreciated for the readers to include the author's data of US elastography and liver histology in this review. The authors may report their follow up data in the future.

We are thankful for the kind words. We added the 'limitation' part in our revised paper. We are collecting our data of ultrasound in AIH now and our results will be reported in the future original article.

## **Reviewers 3:**

1. The paper should be focused only on imaging techniques and especially ultrasound based techniques for estimation of liver fibrosis in patients with autoimmune hepatitis. Thus, other sections in the manuscript like "Classification", "Pathogenesis", "Clinical manifestations", "Diagnosis", "Laboratory assessments", "Differential diagnosis", "Treatment should be minimised".

We are thankful for the kind words. Since ultrasound findings in AIH have not been reported systematically so far. No characteristic imaging features of AIH have been described. So the part of ultrasound findings is limited. We minimised certain parts according to reviewer's suggestion.

2. Page 8, paragraph 2: the sentence "Imaging features of AIH are those of chronic liver disease, and it plays an important role in detection of complications and ruling out other possible causes of chronic liver disease" should be modified because imaging findings cannot distinguish different causes of chronic liver diseases apart from very few (e.g. veno- occlusive disease of the liver).

We are thankful for the kind words. We modified and changed the sentence to

'Imaging features of AIH might play an potential role in detection of complications of chronic liver disease' according to reviewer's suggestion.

3. Page 9, paragraph 1: it should be more clearly stated that MRC is indicated in all children with AIH irrespectively of the presence of cholestasis, while in adult population MRC should be performed only in the case of the presence of cholestasis. We are thankful for the kind words. We modified and changed the sentence to 'Magnetic resonance cholangiography (MRC) is recommended in all children and adult patients with elevated markers of cholestasis in order to detect concurrent overlap syndromes, particularly PSC'.

4. Page 10, paragraph 3: change the abbreviation for fibrosis stage from "S" to "F".  
Done

5. Page 11, paragraph 2: the sentence "ARFI can distinguish patients with autoimmune liver diseases from healthy subjects" should be modified in order to avoid wring messages. ARFI can distinguish liver fibrosis not to diagnose autoimmune hepatitis.

We are thankful for the kind words. We modified and changed the sentence to 'ARFI can help to distinguish liver fibrosis patients with autoimmune liver diseases from healthy subjects'.

6. In "Conclusion" the authors state that "In conclusion, AIH is characterized by wide fluctuations in inflammatory activity, Thus, stage of fibrosis can be overestimated by SWE due to concomitant hepatic necroinflammatory activity". SWE should be changed to transient elastography. Also in Figure 4: SWE is different from transient elastography.

Done and Figure 4 was deleted.