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Reviewer's code: 03656580

SPECIFIC COMMENTS TO AUTHORS

Authors investigated magnetic resonance elastography (MRE) and two-dimensional shear-wave elastography (2D-SWE) to identify significant fibrosis, and to compare their performance with that of serum-based indices in treatment-naïve CHB patients with borderline-normal ALT levels, who should be considered for initiation of antiviral therapy depending on significant fibrosis. The data demonstrated that MRE was a more accurate and noninvasive measurement for detecting significant fibrosis, compared to 2D-SWE as well as serum-based indices. However, some limitations in the MS, such as the liver biopsy as the reference standard for assessing liver fibrosis, assessed liver fibrosis for antiviral therapy decision making con't reflected hepatocyte inflammation, and relatively small sample size.

→ We appreciate the reviewer's comment, and we acknowledge the limitations of the study. According to the other reviewer's comment, we added the limitation of MRE as it is much more expensive than 2D-SWE and is available only in tertiary centers.

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Reviewer's code: 03475636

SPECIFIC COMMENTS TO AUTHORS

Manuscript is well and originally written. I have no competing interests. This is very informative and well-written manuscript that will establish homogeneous research in this topic of interest. Strongly suggest including the findings of AUC, PPV, and NPV into the result section in the abstract.

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, the findings of AUC, PPV, and NPV of MRE and 2D-SWE were included in the result section in the abstract.

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Reviewer's code: 00032020

SPECIFIC COMMENTS TO AUTHORS

To compare the accuracy for diagnosis of hepatic fibrosis by serum-based index, 2D-SWE, and MRE, 63 treatment naïve CHB patients were enrolled to the present study. In conclusion, MRE was the most reliable modality for evaluation of hepatic fibrosis to make a decision of treatment initiation for CHB patients with high viral load and mild ALT elevation. Previous reports including systematic review clearly showed that MRE was superior as non-invasive diagnostic modality for hepatic fibrosis, compared to other methods. So, the present study confirmed the previous reports in treatment naïve CHB patients with mild ALT elevations.

1) First of all, when did authors started MRE for patients with liver diseases in their hospital?

   → We appreciate the reviewer's comment. We started MRE for patients with chronic liver disease or liver cirrhosis in our hospital in 2013.

2) One patient (1.5%) failed to MRE. Which characters were associated with MRE failure? Authors should add the comments in Discussion.

   → We appreciate the reviewer's comment. MRE failed to provide LS values in one patient because there were no visible waves on MRE images due to overweight (BMI = 27.9). Technical failure rate was lower in MRE (n=1, 1.5%) than in 2D-SWE (n=3, 4.5%). According to the reviewer's recommendation, we added the comment in the Result and Discussion section.

3) Authors mentioned that one of the limitations was the sampling errors in hepatic biopsy. So, which fibrosis stage is the most reliable for treatment decision, by MER or hepatic biopsy?

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→ We appreciate the reviewer's comment. We considered METAVIR scoring ≥ F2 as the most reliable stage for antiviral treatment, even if ALT level is normal or mildly elevated (< 2 times), because long-term viral suppression reduces liver-related complications, such as decompensated cirrhosis or HCC, in these patients.

Reviewer's code: 00182703

SPECIFIC COMMENTS TO AUTHORS

The article is interesting and useful for clinicians, but its findings must be confirmed by extensive studies. The title of the article should mention that it is a pilot study (as it is made on only 63 patients). Statistical analysis is the best part of the article. References are classical and new and reflect the state of knowledge in the field at present. There are some grammatical and non-grammatical errors that need to be corrected: can reduce the disease progression of (towards) HBV-related cirrhosis; ALT level s normal; HBeAg positive patients with > 20,000 IU/mL; HBeAg-negative patients with > 2,000 IU/mL; Fig. 1. Images of MRE (3A, 3B, 3C, 3D) and 2D-SWE (3E) (instead of 1A, 1B, and so on).

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, we revised the title "**Assessing significant fibrosis using imaging-based elastography in chronic hepatitis B patients: pilot study".** In addition, errors that the reviewer pointed were corrected.

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Reviewer's code: 02535507

SPECIFIC COMMENTS TO AUTHORS

In this observational study Park et al investigated magnetic resonance elastography (MRE) and two-dimensional shear wave elastography (2D-SWE) as a tool to assess liver fibrosis in patients with chronic hepatitis B naïve to antiviral therapy. Liver biopsy was considered as gold standard. They demonstrated that MRE had a better performance than 2D-SWE. Main comments:

1) The title should be changed since only diagnostic performances of SWE and MRE were evaluated, while there is no data about antiviral therapy.

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, we revised the title "**Assessing significant fibrosis using imaging-based elastography in chronic hepatitis B patients: pilot study".**

2) Please specify which type of multivariate analysis was used. Logistic binomial? Linear regression?

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, we specified it as "multivariate linear regression analyses" in the manuscript.

3) In table 1 as well as in the text, please report the normality range of transaminases.

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, normality range of AST and ALT was reported in the manuscript and Table 1.

4) In the Methods section, Authors stated that they have calculated sensitivity, specificity, positive and negative predictive value. However these results are lacking in the appropriate section (they have reported only AUC values). Please enclose such

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parameters since they are very important and will be greatly appreciated by the hepatologist audience.

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, the areas under ROC (AUCs), cut-off values, sensitivity, specificity, positive predictive values, and negative predictive values for the diagnosis of significant fibrosis (≥ F2) and cirrhosis (F4) using radiology-based or serum-based measurement indices are shown in Table 4.

5) In the Discussion it is important to underline some limitations of the study. For example, despite MRE has the best effectiveness, it is much more expensive than 2D-SWE and is available only in tertiary centers.

→ We appreciate the reviewer's comment. According to the reviewer's recommendation, we added the limitation of MRE in the Discussion section.

6) Patients selection: were subjects with complex cirrhosis etiology (e.g. HBV + HCV, HBV + HDV, HBV + alcohol) excluded?

→ We appreciate the reviewer's comment. Patients with complex cirrhosis etiology such as HBV + HCV or HBV + alcohol were excluded. According to the reviewer's recommendation, we mentioned about it in the Materials and Method section.