Author’s response to reviews


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Author’s response to reviews:

Dear Sirs,

We would like to thank you for your reviews. We have read your comments carefully and corrected the manuscript. Please find the responses to the comments below (in blue).

Reviewer 1:

1. Pg3 Ln14 - "in about 30% of cases due to atypical radiological features [4, 5]." I feel this is an overstatement in the era of MRI. 30% should be more of CT data than MRI. MRI has great accuracy in FNH diagnosis.

-> The data regards multi-phase CT only. The sentence was corrected.

2. Did you encounter any problems with suboptimal hepatobiliary phase (not because of artifacts) due to liver dysfunction?

-> Suboptimal HBP can occur 10-20 min. after Gd-EOB-DTPA administration in patients with cirrhosis. In our everyday practice we observe suboptimal HBP after Gd-EOB-DTPA in course of cirrhosis. In such cases additional images are acquired 30 min. after CM administration. In our study, Gd-BOPTA was used and HBP was obtained 60 min. after CM injection. In our material, we did not encounter suboptimal HBP.
3. It is fairly well known that MRI outperforms CT in the diagnosis of focal lesions at least practic ally. So with the addition of hepatobiliary contrast (an additional diagnostic parameter), naturally it is going to overshadow CT. Authors could have evaluated the role of Gd-BOPTA like its additional value in the diagnosis.

-> In the study the Authors could perform such an analysis, however, the study was designed otherwise.

4. In and out phase was performed?? Any fat containing FNH?

-> In and out phase imaging was performed. None of the FNH lesions contained fat.

5. What do you mean 'absence of enhancement in PV phase- What about wash-out?'

-> The sentence was rephrased: ‘In PVP enhancement pattern was divided into following subtypes: equal to the liver, ring enhancement, centripetal enhancement, homogeneous enhancement, heterogeneous enhancement or absence of enhancement (wash-out).’

6. Did you encounter pseudo-washout with Gd-BOPTA?

-> In our material, we did not encounter pseudo-wash-out on EP after Gd-BOPTA administration. In our experience, the pseudo-wash-out can be seen after Gd-EOB-DTPA injection.

7. Inflammatory hepatic adenoma is a hot topic now and mimics FNH. In your large sample size, any of FNH turned out to be adenoma on histopathology?

-> There was single misdiagnosed HCA lesion, 42mm in diameter, lobulated shape and enhancement in HAP and HBP. In histopathological examination HCA was confirmed. This information was added at the end of the result section.

8. Table 5 and 6 - Lot of repeat of the information in the text. Either keep the text or table.

-> The tables were removed from the manuscript and appear as Additional files.

9. Images are not adequate. More representative images of HBP appearance of FNH could be added.

-> An MRI images were added with T1-, T2-weighted images, HAP, PVP and HBP. The existing Figure 2 was moved to Additional files.

Reviewer 2:

1. Clarity can be improved in places, specifically: Abstract, methods: For clarity, please present here as 157 patients with equivocal FLLs detected in US who were subsequently examined by mpCT and ceMRI.
The abstract was corrected according to the Reviewers suggestion.

2. Results, p5 line 24: more detail needed here, such as "Table 1 lists all clinical symptoms for nonFNH and FNH that lead to initial US examination in those examined by MRI as well as CT."

The sentence was corrected according to the Reviewers suggestion.

3. P5, line 25: Unclear! According to Table 3 there were 35 patients with HCC rather than 38. Were there 3 liver cirrhosis patients without HCC (seems low)? Please specify the pathology in those 3 patients.

Thank you for finding this error. The mistake is the result of editing the manuscript. There were 38 pts with confirmed histopathological cirrhosis: 35 with HCC, 1 with RCC metastasis and 2 with CRC metastases. The sentence was corrected, above mention data was added.

4. P6, line 3: change to: "FNH and non-FNH patient characteristics are listed in Table 2."

The sentence was corrected according to the Reviewers suggestion. On Pg5,ln2 and 3 (according to manuscript original numeration) names of FNH and non-FNH groups was introduced for clarity.

5. Heading of Table 1: replace "The cause .." by "The indication for performing US in patients examined by CT and MRI (n=157)."

The heading was corrected according to the Reviewers suggestion.

6. Table 2, men to women ratio 1:1.19 and 1:3.88: Please list as male/female 54/64 and 8/31.

The table content was corrected according to the Reviewers suggestion.

Reviewer 3:

1. Central scar presence was seen more often in larger lesions on both CT and MR. You state that there were 21 patients with histopathological examination. How many did not have central scar?

In 15 patients diagnosed with FNH, the central scar was seen in histopathological examination. In the rest of specimens areas of congestion were observed.' This information was added the beginning of the Result section.
2. Although this paper is on FNH, the number of additional lesions discovered by MR vs CT was significant (45 more). Can you comment whether the radiologist could find in retrospect the lesions missed on CT?

-> ‘In the retrospective analysis, the readers discovered 31 of 41 missed lesions (69%) in CT examinations. The missed lesions were HH (12 lesions), HCC (11) and metastases (8). The decision was based on a consensus of the three readers.’ This information was added at the end of the Result section.

3. In page 7, line 22, you use the wording radiological symptoms, which is not appropriate. I recommend using different wording (signs).

-> The sentence was corrected according to the Reviewers suggestion. Additionally, in the whole manuscript uniform name was implemented (radiological sign) for clarity.

4. Enhancement in HBP was an important criterion when cirrhotics were excluded) page 7, line 24). How many FNH were seen in cirrhotics?

-> None of the FNH pts had cirrhosis. This information was added at the beginning of the Result section (Pg6, ln 7 according to the original numeration).

Additionally, the manuscript was revised by English native speaker.