Author's response to reviews

Title: Measurement of serum procalcitonin levels for the early diagnosis of spontaneous bacterial peritonitis in patients with decompensated liver cirrhosis

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Replies to the reviewers

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Dear reviewers,

I would like to thanks for your critical review. We have explained or revised in which all the points raised by you. We would be very grateful if you would like to accept our revision and explanations.

Reviewer 1:
1. Thanks for your comments. Indeed, testing serum PCT as a biomarker of SBP is not our original idea. Several papers including the ones mentioned by you have provided conflicting results. We have promptly added some references in the background and discussing part of the revised manuscript. However, we conducted this study, to determine the diagnostic value for SBP in DCPs of serum PCT levels alone with different cut-off or combination with peripheral blood WBC/PLT, is different with publications mentioned by you.

2. Thanks for your recommendation. In fact, in clinical, it is difficult to diagnose SBP early in DCPs with ascites because the clinical manifestations and ascitic biochemical characteristics are often inconsistent and ascitic fluid cultures are frequently negative and time consuming, so it is not always an available option in emergency or early diagnosis. However, it is well known that serum PCT can be rapidly and easily detected as early diagnostic biomarker in patients with sepsis. So, we conducted this study to determine the diagnostic value of serum PCT levels alone or combination with peripheral blood WBC/PLT ratios to obtain an early diagnostic indication of SBP in DCPs.

3. Yes. In the first part of discussion were mostly regarded pathogenesis and outcomes of DCPs with SBP. We have removed some sentences in the revised manuscript.

4. Yes, we have revised.

Reviewer 2:
1. In this paper, the data are expressed in the format of mean ± standard deviation. The standard deviation of the data is larger than the mean, but which doesn’t mean the concentration was negative. The data may also be expressed as “median (minimum-maximum)” in text.

2. Figure 1 & 2 have been revised according to your requirements, thanks.

3. We have added the limits of the study in the discussion part of the manuscript (revised manuscript).
Reviewer 3:
1. Thanks for reviewer’s comments. Sepsis is a kind of severe infection, but our diagnostic criteria is for infection other than sepsis (“Bone-Criteria” Bone RC et al., Chest 1992), and more and more atypical manifestations of infections in DCPs can been seen. So, the diagnostic criteria of infections, especially in SBP, was based on our clinical practices and guideline from EASL. We sincerely hope that the criteria of infections in DCPs as reported in this work may be used as a new criteria in clinical practice in the near future.
2. The optimal cutoff value of WBC/PLT was determined by calculating the point on the ROC curve with the maximum Youden index (sensitivity-[1-specificity]), which has been added in the method part of the manuscript. Thanks!
3. Thanks for your comments. The PMN count was a diagnostic criteria of SBP in this study, so we could not draw the ROC curve of PMC and compare it with the other proposed biomarkers.
4. We have revised. Thanks!
5. The Figure 1 & 2 have been modified according to your suggestions.

Thanks for your patience!

Sincerely,
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