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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Author's response to reviews: see over
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Dear editor,

Thank you for your prompt reply, and thanks for the reviewers’ important comments. We have revised the manuscript in light of the reviewers’ recommendation by giving point-to-point responses to all the comments. We would be very grateful, if you could reconsider the revised manuscript for publication.

Replies to the reviewers:

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 some but conflicting results. We have promptly added some references in the background and discussion parts in the revised manuscript.

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 made the changes.

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

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

3. We have added the limits of the study in the discussion part of the manuscript.

Reviewer #3:
1. Thanks for your comments. Sepsis is one 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. 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, we could not draw the ROC curve of PMC and compare it with the other proposed biomarkers.

4. We have revised the text accordingly. Thanks!

5. Figure 1 & 2 have been modified according to your suggestions.

These are our replies to address all the comments and questions from reviews. We would be grateful if you would kindly reconsider our manuscript.

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