

Point by point explanations to reviewer's concerns.

Manuscript NO.: 88938, World Journal of Transplantation.

Dear Reviewer's,

Thank you very much for the review of our manuscript NO 88938 entitled: *"Improving the radiological diagnosis of hepatic artery thrombosis after liver transplantation: Current approaches and future challenges"*, submitted to the World Journal of Transplantation.

We greatly appreciate the valuable comments and suggestions, that have helped us enhance the quality of the article.

Our responses to the Reviewers' comments are described below in a point-to-point explanation format. All comments and suggestions have been introduced to the manuscript (highlighted within the document).

I confirm that this manuscript has not been previously published, accepted for publication elsewhere and it is not under consideration elsewhere for publication.

The work has been conducted in accordance with internationally accepted ethical standards. All authors have contributed significantly to the work, and they have reviewed and approved the final version of the manuscript.

Furthermore, we declare that there are no conflicts of interest. We hope that our manuscript will be acceptable for publication in World Journal of Transplantation.

Sincerely yours,

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Reviewer #1:

1. The manuscript in general needs more details about the diagnostic findings, management approaches and the role of AI.

Answer: As suggested, we have added more details regarding the diagnostic imaging findings, as well as management approaches for HAT. Additionally, we have rewritten the second section to include more details about the role of AI in the diagnosis of HAT. Specifically, we emphasize those algorithms that have demonstrated high diagnostic performance for the detection of vessel occlusions, which could be a promising complement to the diagnosis of HAT.

2. Add in the article title "radiological" diagnosis of HAT ...

Answer: The authors appreciate your comment about the title. We added in the article title the word "radiological", and now it appears as: *"Improving the radiological diagnosis of hepatic artery thrombosis after liver transplantation: Current approaches and future challenges"*.

3. Please add a paragraph on the incidence and management of HAT in pediatrics liver transplant recipients

Answer: As suggested, we added a new paragraph to mention the incidence and management of HAT in pediatrics liver transplant recipients.

4. Please mention the risk factors for the development of HAT in liver transplant patients

Answer: As suggested, we added new paragraphs to mention the risk factors for the development of HAT in liver transplant patients.

5. *Add a paragraph about the incidence and diagnosis of late HAT.*

Answer: As suggested, we added new paragraphs to mention the incidence and diagnosis of late HAT.

6. *Mention the clinical features and laboratory findings in HAT.*

Answer: As suggested, we add new paragraphs to mention the clinical features and laboratory findings in HAT.

7. *Add figures for MRA findings and figures for interventional radiology approaches for treatment of HAT.*

Answer: As suggested, we included additional figures in the manuscript illustrating the MRA findings using Axial T2-weighted single-shot fast spin-echo (SSFSE) images with fat saturation (Fat-sat), as well as contrast-enhanced T1-weighted gradient-echo images in the late arterial and portal phase (Figure 3). Moreover, we have included Figure 4 to demonstrate arterial angiography, showcasing complete occlusion of the hepatic artery and subsequent recanalization, resulting in improved intrahepatic flow following interventional management."

8. *Add more details about algorithms provided by AI for management of HAT and how they speeded up or resolved the diagnostic dilemma of HAT.*

Answer: We appreciate this observation. The third section has been revised, and we now emphasize certain AI algorithms that are utilized for the diagnosis of HAT, particularly those algorithms that have demonstrated high diagnostic performance in detecting vessel occlusion in CTA. These advancements could potentially offer a promising landscape in the field of HAT diagnosis.

9. *The abbreviations should be first mentioned in details then used thereafter.*

Answer: We thank for this observation. All abbreviations are first openly expressed in the first use.

Reviewer #2:

1. I commend the authors for selecting a pertinent and current topic. However, I would like to highlight some relevant issues that should be addressed. Firstly, this article appears to resemble more of a review rather than an editorial. Editorials typically maintain a higher level of objectivity. I recommend focusing the discussion on the application of AI in the diagnosis of HAT and setting aside some of the clinical aspects. In fact, there are inaccuracies regarding the clinical presentation of HAT. For example, it is well-known that biliary graft ischemia is associated with ischemic cholangiopathy.

Answer: The authors would like to express their gratitude for this valuable observation. We have rewritten the second section, maintaining the discussion on the application of AI in the diagnosis of HAT, with a particular emphasis on those algorithms that have shown high diagnostic performance in detecting vessel occlusion in CTA. Additionally, we have removed the clinical aspects that were not requested by the reviewers, and focused on well-known aspects, such as biliary complications. High-quality references were added to support this statement (Refs 12-15).

2. English style should also be reviewed, as there are a few instances of concordance and grammatical imperfections.

Answer: The authors would like to express their gratitude for this observation. The English style has been reviewed, eliminating grammatical errors present in the text.

