

March 18, 2021

Dr. Lian-Sheng Ma
The Editor in Chief
World Journal of Transplantation

Dear Dr. Lian-Sheng Ma

Re: Manuscript 64154

We would like to thank the reviewers for their time and their effort in reviewing our manuscript. We have read the reviewers' constructive criticisms and made the necessary corrections.

We would like to re-submit a revised version of our manuscript with the corrections made in bold type and also listed below point-by-point:

- **Reviewer 1 Commented: It is a well written manuscript on anatomic variations of the right hepatic vein and its surgical importance. It is a retrospective study of 230 CT scans. We appreciate the authors for this study. The information is useful while considering surgical treatment of these patients from the Eastern Caribbean.**

We would like to thank the reviewer for these comments. No action is required.

- **Reviewer 1 Commented: We recommend the authors to reduce the content in the discussion section and make it more concise.**

We have read the reviewer's constructive criticism. In an attempt to make the necessary adjustments, we have removed a large volume of text from the discussion section. In total, we have removed one paragraph and 157 words from the discussion. The individual changes are outlined below.

In keeping with the reviewer's request to shorten the discussion, we have omitted the following sentence: *"Unfortunately, there are many different descriptions and classifications of the RHV [1-6] that make comparative analyses difficult. Nevertheless"*. In the original version, this sentence appeared at the discussion section, first paragraph, second sentence.

In keeping with the reviewer's request to shorten the discussion, we have omitted the following words from the third sentence of the first paragraph: *"Using the classic patterns described above"*

In keeping with the reviewer's request to shorten the discussion, we have omitted the following phrase from paragraph 2, sentence 3: *"venous drainage from the right hemi-liver"*

In keeping with the reviewer's request to shorten the discussion, we have removed this phrase from the fourth sentence of the first paragraph in the discussion section: *"Proximal confluence (61%), accessory RHVs (49.2%), HCJ variants (29.7%), both dorsal and ventral segment VIII veins entering middle hepatic vein (28%) and absent segment VII tributaries (4.2%)."* Technically, this information is already mentioned in the results section.

In keeping with the reviewer's request to shorten the discussion, we have now shorted the first two paragraphs and combined them into a single paragraph.

In keeping with the reviewer's request to shorten the discussion, we have removed this phrase from the second sentence of the second paragraph *"planning for and outcomes from"*

In keeping with the reviewer's request to shorten the discussion, we have removed the third sentence in the second paragraph, which originally read: *"This can be achieved in properly-timed venous contrast phases on high quality CT scans that are readily available in modern clinical practice."*

In keeping with the reviewer's request to shorten the discussion, we have removed the following phrase from the fourth sentence in the second paragraph: *"in all patients who are being prepared for invasive procedures on the liver"*

In keeping with the reviewer's request to shorten the discussion, we have removed the phrase *"Considering the clinical slant of this paper"* from the second line of the third paragraph.

In keeping with the reviewer's request to shorten the discussion, we have removed the definition of *"anterior right sectionectomy (excision of segments V/VIII)"* because the readers of this paper would already know the definition of anterior right sectionectomy.

In keeping with the reviewer's request to shorten the discussion, we have removed the following phrase from the discussion section, Variations in Hepatocaval Junction sub-section, paragraph 1: *"In our study, at the HCV"*

In keeping with the reviewer's request to shorten the discussion, we have removed the following phrase from the discussion section, Variations in Hepatocaval Junction sub-section, paragraph 1, line 5: *"In addition, a longer extra-hepatic"*

In keeping with the reviewer's request to shorten the discussion, we have removed the entire second sentence from the discussion section, accessory right hepatic veins subsection: *"In these cases, IRHV variants present unique technical challenges."*

In keeping with the reviewer's request to shorten the discussion, we have removed the entire second sentence from the discussion section, accessory right hepatic veins subsection, paragraph 5: *"We did not encounter any complex patterns."*

In keeping with the reviewer's request to shorten the discussion, we have removed the entire fifth sentence from the discussion section, accessory right hepatic veins subsection, paragraph 6: *"In these cases, we consider open resections instead of laparoscopic resections."*

- **Reviewer 1 Commented: It would be important to discuss more about the surgical implications of these anatomic variations.**

We have read the reviewer's constructive criticism. In an attempt to make the necessary adjustments, we have included some surgical implications of these variations as outlined below:

Discussion section, paragraph 2: We have added a statement to explain that a distal confluence is advantageous because it may facilitate parenchymal-sparing liver resections since venous outflow can be preserved in the main trunk plus one of the two tributaries. This sentence appears at line 3 of the second paragraph.

Discussion section, paragraph 2: We have added a statement to explain that a well-defined segment VIII tributary was advantageous as it may facilitate anterior right sectionectomy by preserving venous outflow from the future liver remnant. This sentence now appears at line 3 of the third paragraph.

Discussion section, paragraph 4: We have added a statement to explain that the variant where both dorsal and ventral segment VIII veins emptied into the middle hepatic vein was disadvantageous for two reasons. First, in patients who undergo an anatomic left hepatectomy it would compromise the FLR by causing venous congestion in segment VIII. Secondly, it can cause graft dysfunction after transplantation due to venous occlusion if the segment VIII veins are not reconstructed. These explanations are outlined in paragraph 4.

Discussion section, paragraph 7, sentence 1: A statement was included to explain that a type I SRHV is advantageous because it is easier to control outside the liver.

Discussion section, paragraph 7, sentence 3: We added a statement to explain that a type I SRHV is advantageous because it facilitates the hanging maneuver.

Discussion section, paragraph 7, sentence 5: A statement was included to explain that a type I SRHV is advantageous because it makes right lobe donation and recipient implantation technically easier.

Discussion section, paragraph 8: A statement was included to explain that the Nakamura & Tsuzuki type IV anomaly is dangerous because it becomes technically difficult to control these veins and there is increased risk of bleeding.

Discussion section, paragraph 10, sentence 4: We included a statement to explain that accessory veins can be damaged and cause excessive bleeding intra-operatively.

Discussion section, paragraph 11: A statement was included to explain that a large inferior right hepatic vein makes transplantation difficult as it would need to be re-implanted to prevent venous outflow obstruction and subsequent parenchymal congestion that would threaten the graft.

Discussion section, paragraph 11: We included a statement to explain that the presence of an inferior RHV increases technical difficulty of a liver transplant because re-implantation into the IVC becomes more difficult as the distance from the HCJ increases.

Discussion section, paragraph 12: A statement was included to explain that an inferior right hepatic vein may be advantageous in selected circumstances when it may facilitate a tailored Makuuchi resection that is based on the IRHV preserving segment VI venous outflow.

Discussion section, paragraph 13: We included a statement to explain that the presence of a middle hepatic vein was considered a marker of technical difficulty, especially at laparoscopic resections because it is completely concealed behind the liver and difficult to control with laparoscopic instruments. Therefore, we offer these patients open resections instead of laparoscopy.

- **Scientific Editor Commented: The authors should provide original figure documents prepared in power point to ensure that all graphs or arrows or text portions can be reprocessed by the editor.**

In keeping with the Scientific Editor's suggestion, the figures have all been organized into a single power point file, with all parts editable, and named "64154 Tables.docx"

- **Scientific Editor Commented: The article highlight section is missing. Please add article highlights at the end of the main text.**

The Article Highlights section has been added after the main text / conclusion.

- **Editor in Chief commented: uniform presentation should be used for figures showing the same or similar contents; for example, “Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...”.**

As suggested by the editor, the images now have a uniform presentation. All venous structures identified in the images have uniform labels.

- **Editor in Chief commented: Please provide decomposable Figures (whose parts are all movable and editable), organize them into a single PowerPoint file, and submit as “64154-Figures.ppt” on the system.**

In keeping with the Editor’s suggestion, the figures have all been organized into a single power point file, with all parts editable, and named “64154 Tables.docx”

- **Editor in Chief commented: Please provide decomposable Tables (whose parts are all movable and editable), organize them into a single Word file, and submit as “64154-Tables.docx” on the system.**

In keeping with the Editor’s suggestion, the tables have been organized into a single word file and submitted with the name “64154 Tables.docx”

We hope that the revised manuscript meets the requirements for final acceptance and publication.

Best regards
Shamir Cawich