

Dear editor,

Thank you for the comments made by the editors and reviewers. We are very grateful for the comments and conditional acceptance of our manuscript. We have revised the manuscript very carefully based on the recommendations made. A repeat submission has been completed and our specific reply to each reviewer are as follows;

Reviewer #1

This is a well-written and relevant manuscript for the field that addresses a topic that is not very frequently raised. The methods and the results are correctly presented and explained and I believe this is a relevant issue for the readers.

Answer: Thank you for the positive and encouraging remark. We also hope this will generate interest among the readers given the potential widespread clinical applications.

Reviewer #2

Dear Authors, after reading your paper, I was surprised of how little well-controlled trials were performed using TEG in liver patients. TEG was used extensively in liver transplant recipients for the last 30 years, and physicians started to use it in trauma, obstetric and cardiac cases. I do agree with your conclusion that it may be the time has arrived to establish a protocol or practice guidelines to apply TEG as a point of care in patients with liver diseases undergoing surgical procedures. At our liver transplant center we do have practice guidelines to apply TEG reading in the clinical care of liver transplant recipients as well as in patients with chronic liver disease undergoing major surgical procedures. I hope that your paper will generate the interest in establishing such protocol.

Answer: Thank you for your comments and feedback. Although TEG has been around for many years in a variety of settings and available in most healthcare institutions, we believe the potential to optimize haemostatic management in chronic liver disease outside of the transplantation setting is under recognized. We also hope that our paper will generate interest on this topic and help establish protocols that utilize TEG as a point of care test to improve care.

Reviewer #3

As stated correctly, VT has been shown to reduce blood product use and improve haemostatic management in LT. Therefore, the authors are requested to explain why a study in the setting of LT was included in this review, as the aim of the review was to investigate VT outside the setting of LT.

Answer: Thank you for your feedback. Despite the widespread use of viscoelastic tests in the liver transplant setting, there is limited randomized controlled data for chronic liver disease patients. Our aim was to assess the utility of VT guided transfusion in chronic liver disease patients who presented with bleeding or who require an invasive procedure. We included the randomized study by Wang et al involving orthotopic liver transplant because this was relevant to investigate the role and safety of TEG in guiding transfusion therapy in the setting of major surgery, an invasive procedure with high risk of bleeding. These were patients with similar baseline factors and coagulopathy compared to the other randomized trials examining the use of TEG prior invasive procedures outside the transplant

setting. The overall MELD score of the study by Wang et al was 11.3 compared to MELD-Na of 13.5 reported by Vuyyuru et al and 20.9 in the study by De Pietri et al.

To help explain this to our readers, we have added a paragraph in the manuscript under the “Analysis of the randomised control trials: included studies” section.

Science editor comments:

Issues raised: (1) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor;

Answer: We have now provided the original figures attached to the bottom of our revised manuscript. There are 4 figures in total and all graphs should now be able to be reprocessed by the editor.

(2) PMID and DOI numbers are missing in the reference list. Please provide the PubMed numbers and DOI citation numbers to the reference list and list all authors of the references.

Answer: We have now updated the reference list to include PMID and DOI for all references that are available. This has been revised throughout for all 27 listed references.

(3) The “Article Highlights” section is missing. Please add the “Article Highlights” section at the end of the main text.

Answer: Thank you for your feedback. We have now added the article highlight section in our revised manuscript which comes after the discussion and before the references section.

Thank you again for this opportunity and we hope that the modifications to our manuscript and replies to the reviewers will be sufficient. However, if there are any additional questions or suggestions to help improve our manuscript then please do not hesitate to contact us.

Yours sincerely,

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