Reviewer’s report

Title: Monitoring of argatroban and lepirudin anticoagulation in critically ill patients by conventional laboratory parameters and rotational thromboelastometry - a prospectively controlled randomized double-blind clinical trial

Version: 0 Date: 08 Aug 2017

Reviewer: Nathan Clendenen

Reviewer's report:

The manuscript "Monitoring of argatroban and lepirudin anticoagulation in critically ill patients by conventional laboratory parameters and rotational thromboelastometry - a prospectively controlled randomized double-blind clinical trial" presents compelling data supporting the use of ROTEM to supplement the typically employed clinical anti-coagulation monitoring for argatroban and lepirudin.

The manuscript is well written and addresses an important clinical need to closely monitor anti-coagulation in critically ill patients and is adequately powered to detect significant correlations between the clinical tests and drug levels.

Specific suggestions: The manuscript would benefit from a comment on whether the patients' baseline coagulation parameters differ substantially from normal values before treatment with argatroban and lepirudin. This would also help as a frame of reference to appreciate the change in the lab values with treatment. Similarly, a comment on whether the inter-assay variability differs substantially when analyzing samples from critically ill and anti-coagulated patients compared to typical variability when testing healthy controls. This would further support ROTEM as a testing modality with the potential to supplant conventional anti-coagulation monitoring. The authors could also highlight potential limitations of ROTEM such as availability of the assay or cost.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
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Acceptable

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