Reviewer’s report

Title: Serum Copeptin Levels in the Emergency Department Predict Major Clinical Outcomes in Adult Trauma Patients

Version: 1 Date: 05 Dec 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?
Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?
Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?
Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Overall, I found this study to be interesting and clinically relevant. The authors have conducted a study to assess the test characteristics of copeptin to predict ISS > 15 and compare its performance to lactate. Overall, the authors have strengthened the manuscript based on the prior review. However, many questions remain that could improve this work.

REQUESTED REVISIONS:
) The statement that it is superior to lactate is not true for all the outcomes listed in the abstract (review table 2 please). 2) There are some spelling errors that exist (line 5 "hormon", and a few others). 3) More description is needed about what RTS 7.84 means and why that particular number was chosen for the subgroup analysis. 4) There is no discussion of the secondary role of lactate as a marker of
resuscitation and the value in this population in the context of the results. 5) Perhaps the greatest concern that I have is that is unclear how copeptin would be used in this population. There are some references to using it as a triage marker, but given the imperfect sensitivity and specificity, it is unlikely that this would replace imaging as the primary means of diagnosing the critically ill trauma patient. It would be useful for the authors to discuss what clinical decision might change with access to copeptin results (i.e. in situations without access to advanced imaging?). 6) In the introduction, other studies of trauma patients are described as "conflicting" but there is no further discussion of this literature and how it compares and how this particular study resolves this conflicting literature (or not).

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
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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