Reviewer’s report

Title: Proenkephalin A 119-159 (penKid) – a novel biomarker for acute kidney injury in sepsis: An observational study.

Version: 0 Date: 10 Sep 2019

Reviewer: Corey B. Bills

Reviewer's report:

Thanks so much for allowing me to review your manuscript. As discussed this manuscript seeks to determine whether a novel biomarker, penKid, is predictive of AKI, multiorgan dysfunction, and mortality. Previous literature suggests a correlation between penKid and these endpoints. Given the complicated nature of establishing AKI in the ED and the difficulty in general of treating patients with sepsis this article has importance to ED clinicians seeking methods of bettering their care.

In general this is a well thought out article that is clear, concise and provides additional support of the value of penKID. I only have minor comments as below.

ABSTRACT
In general the abstract is clear. The background provides good insight to the value of the aims of the study.

Regarding the methods, while the following are reported in the manuscript it might help to specify briefly: How were patients enrolled? Randomly, consecutively; Briefly explain exclusion criteria, and over what time period, so that the author has a better sense of what proportion of patients this represents.

Page 3, line 1: What does "income level of penKid mean"? Please clarify and again on line 17

Page 3, line 22: The use of the term "unselected" is unclear to me.

INTRO/IMPORTANCE
Page 4, line 37: please provide citation for reliability.

Regarding the AKI definitions. What proportion of patients presented with AKI (rather than developed AKI during presentation throughout to the follow-up 7 days)?

Page 9 line 25: if not already done previously can you define severe sepsis for the reader?

METHODS/RESULTS/DISCUSSION/LIMITATIONS
Recognizing that eGFR is a component of sCr, but was wondering if sCr was at all predictive of renal function/aki, MOF or mortality at 48 or 7 days, especially given the current definitions/standard by KDIGO and RIFLE use sCR and not eGFR?

Secondarily given the standard practice of ED physicians is the use of Scr as a measure (in some even more than eGFR) it might be helpful to include this info. In other words, given the
conclusion that penKid is an effective predictor of AKI even in normal Cr is there a way to strengthen this in the results section to make it more clear.

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:

Acceptable

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