Author’s response to reviews

Title: A PROSPECTIVE STUDY OF CLINICAL CHARACTERISTICS AND OUTCOMES OF ACUTE KIDNEY INJURY IN A TERTIARY CARE CENTRE

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Author’s response to reviews:

Dear Editor,

We appreciate the time and efforts by the editor and reviewers in reviewing this manuscript. We have provided a combined point-by-point response letter to the comments raised at Revision 1 and the comments raised at Revision 2 (editor’s comments) and a copy of the revised manuscript and believed that the revised revision can meet the journal publication requirements.

Thank you very much.
Reply to Editor

Reviewers’ comments at Revision 1

Josée Bouchard (Reviewer 2): I appreciate the efforts made by the authors to improve the quality of the manuscript.

Some comments still need to be addressed:

1. "Principal diagnosis of patient at the time of hospital admission should be included in the multivariate analysis": The authors have included the etiologies of AKI and not the principal diagnosis. If the principal diagnosis is significant in univariate analysis, it should be included in the multivariate analysis.

Response: Thank you for your comment. However, principal diagnosis was not included in the data collection. We will include the above into future studies.

2. "There are also concerns about lack of novelty": the authors did not clarify what findings were new and those which confirmed previous findings in the literature.

Response: Thank you for your comment. There is no data from Singapore on incidence or prevalence of acute kidney injury (AKI). This study was intended to give us an insight into the different phenotypes of AKI in which the etiologies of AKI in Asia are mostly infection-related AKI which is different from the Western population. This is the first study to look at AKI in Singapore. The etiologies of AKI in our study were different from those reported in the Asian countries which were predominantly infection-related AKI.

3. "How about those who lack baseline? How did you deal with these patients? It was unclearly stated. Recommend to use: The use of using SCrGFR-75, when baseline outpatient SCr was not available (suggested PMID: 26748909)." The authors answered: Thank you for your comment. Baseline serum creatinine was defined as the reading on admission or the latest available serum creatinine within the preceding 12 months prior to admission, whichever available.

I suggest that the authors mention what percentage of patients had their AKI status based on admission serum creatinine and what percentage had a creatinine measured before hospitalization.
Response: Thank you for your comment. Baseline serum creatinine was defined as the reading on admission or the latest available serum creatinine within the preceding 12 months prior to admission, whichever available. Data for percentage of patients who had their AKI status based on admission serum creatinine versus the percentage who had serum creatinine measured before hospitalization was not available.

4. "The definition used for AKI should be (i) increase in serum creatinine ≥26.5 umol/l over 48 hours and not from baseline creatinine" the authors have modified the sentence in the methods but not the results according to this definition.

Response: Thank you for your comment. We have checked the data and the results for the study have not changed.

5. For the following comment and response: "I would suggest including only one episode of AKI per patient to simplify the presentation of the results since very few patients had 2 episodes, precluding additional analyses (422 AKI and acute on chronic kidney disease episodes in 404 patients). Response: We included the actual number AKI episodes as we felt that this is a more distinct and accurate representation of AKI in our hospital during the time-period mentioned, as each AKI episode carries a significant short-term mortality risk and this relationship also for holds for longer term outcomes based on reported literature":

Please also report results for one episode of AKI per patient in supplementary material, so that readers can appreciate whether there is a difference in the results by including one or more episodes of AKI.

Response: Thank you for your comment. We have included the analysis of the results of one episode of AKI per patient in the supplementary material.

6. For the following comment: "Please indicate which test was used to compare survival curves (log-rank test according to the legend). Response: Thank you for your comment. Cox-regression was used to compare survival curves."

The response contradicts the legend and seems inaccurate. The Kaplan-Meier method with log-rank test is useful for comparing survival curves in two or more groups, while the Cox regression (or proportional hazards regression) allows analyzing the effect of several risk factors on survival.

Response: Thank you for your comment. Log-rank test was used to compare survival curves.
7. "The mean baseline creatinine seems high (150 umol/l) compare to the literature": please mention baseline creatinine values for those who had a creatinine measured before hospitalization only and include the percentage of patients without creatinine measured before hospitalization (see comment 3 above)

Response: Thank you for your comment. The mean baseline creatinine in our study was likely representative of patients’ characteristics as our study was conducted in a tertiary care centre. We do not have data on baseline creatinine values for patients with creatinine measured before hospitalization and the percentage of patients without creatinine measured before hospitalization.

8. "The discussion should highlight novel results from the study, including comparisons with previous studies from Singapore"

The answer should be further refined.

Response: Thank you for the comment. The above point has been included in the first paragraph of the “Discussion” section.

9. The conclusion should reflect the findings of the study.

Response: Thank you for the comment. The conclusion has been amended accordingly in the “Conclusion” section.

Comments at Revision 2

Editor Comments:

1) "Principal diagnosis of patient at the time of hospital admission should be included in the multivariate analysis". You stated that this was not included in the data collection. Was this information not available to be included and why? If this data is available, it should be included in this study as requested by the reviewers previously.

Thank you for your comment. We did not collect the principal diagnosis of patient at the time of hospital admission. Instead, we collected and analyzed the etiology of AKI, including single or multiple etiologies of AKI and presented them in our study. However, in our future studies, we would certainly include principal diagnosis of patient at the time of hospital admission into our analysis.
2) "I suggest that the authors mention what percentage of patients had their AKI status based on admission serum creatinine and what percentage had a creatinine measured before hospitalization." You responded that this information is not available. However, if you could define baseline serum creatinine as the reading on admission or the latest available serum creatinine within the preceding 12 months prior to admission, why do you not have information on how the AKI status was diagnosed?

Thank you for your comment. Based on our data analysis, thirty nine (39%) percent of AKI were diagnosed based on serum creatinine on admission while sixty one (61%) percent of AKI were diagnosed based on latest available serum creatinine within the 12 months prior to admission.