Reviewer's report

Title: Acute kidney injury in an intensive care unit of a general hospital with emergency room specializing in trauma: an observational prospective study

Version: 2  Date: 14 January 2015

Reviewer: Kevin Finkel

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Major Comments

1. In the results section the tables are mislabeled. The multivariate analysis referred to in line 14, Table 3 is actually Table 4 in the Tables section. Likewise, the comparison of trauma and non-trauma patients should be Table 4 in the manuscript in line 20; it is mislabeled Table 3 in the Table section.

2. On line 4 of the Abstract, what does the term "ICU profile" mean?

3. In Methods, line 10, it is probably more accurate to state that informed consent was obtained from participants or their appropriate surrogate since many were likely unable to give consent themselves.

On line 16, how was chronic kidney disease, an exclusion criteria defined? This should be stated in the manuscript.

4. In the Results section, on line 7, I recommend you also provide the breakdown of AKI not just by stages but also which criteria defined AKI (urine output only; creatinine change only; or both). It is known that urine output is a more sensitive measure of AKI although associated with a better prognosis.

Starting on line 9, since your overall sample size is relatively small (279 total patients) making any statistical claims about sub-groups of patients is hazardous. For example, stating that AKI was more frequent in "cardiac" patients based on a total of 9 patients isn't valid. I think based your hypothesis (trauma patients are usually healthier and younger), it would be better to only compare trauma to non-trauma patients. You can mention in the manuscript what the breakdown of the various non-trauma causes are but the various causes on non-trauma can be eliminated from Table 2. this also makes sense since there is nearly a 50:50 split between these 2 categories.

5. My major concern in regards to the manuscript is stated in your Summary. The hypothesis that trauma patients might experience less AKI or have better survival because they are presumably younger and healthier is sound. The fact that your findings did not support this supposition may have more to do with the population to whom you compared the trauma patients. Your non-trauma patients were not particularly sick with a mean APACHE II score of only 8. There was little sepsis, and many of this group were electively placed in the ICU after non-traumatic
neurosurgery. The fact that the trauma patients had a higher APACHE II score than the other group implies the non-trauma group didn't get many points for chronic diseases which would effect outcome. I'm not even convinced that the non-trauma neurologic patients should be included in the analysis. Being in the ICU doesn't necessarily mean that a patient is truly "critically ill."

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests