Author’s response to reviews

Title: Acute kidney injury among adult patients admitted with sepsis in a low income country: Clinical pattern and short term outcomes.

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Author’s response to reviews: see over
Author’s response to reviews

Acute Kidney Injury among adult patients admitted with sepsis in a low income country: Clinical pattern and short term outcomes.

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Version: 2                  Date: 7th August 2014

Author’s response to reviews: See over leaf
Reviewer 1

**Title**: Acute kidney injury among adult patients admitted with sepsis in a low income country: Clinical pattern and short term outcomes.

**Version**: 2  
**Date**: 26 June 2014

**Reviewer**: Vijay Lapsia

**Reviewer's report**:

In this manuscript titled 'ACUTE KIDNEY INJURY AMONG ADULT PATIENTS ADMITTED WITH SEPSIS IN A LOW INCOME COUNTRY: CLINICAL PATTERN AND SHORT TERM OUTCOMES', the authors Bagasha et al, present prevalence data on AKI among adult patients with sepsis in a referral hospital in Uganda.

**Major Compulsory Revisions**:

That sepsis is a common cause of AKI in critically ill patients is common knowledge, regardless of income status of the demographics in which it is studied. It is also well known that in resourced limited settings AKI leads to poor outcomes. It is unclear from the background provided as to what prompted this study.

Thank you for this very important view, we completely agree with you that it is common knowledge that sepsis is a common cause of AKI in any given setting and in resource limited settings often leads to poorer outcomes however there is paucity of information from sub-Saharan Africa about this very common phenomenon, Uganda in particular is has a world reknown high burden of HIV which greatly influences degrees and outcomes of sepsis and kidney diseases, younger populations are more commonly
involved and most importantly the extent of the problem and to what degree resource limitations are a factor in patient outcomes has not been investigated before.

Why was 1992 ACP guideline used for identification of patients with sepsis?
The 1992 ACP guideline was used because it caters for our limited Laboratory capacity and it has been used before in sepsis studies done in Mulago hospital so comparison of information would not be influenced. Additionally the newer guidelines contain the same variables we used and still consider them vital.

It is not clear from the document how infection was documented?
All recruited patients had a detailed history and physical examination by an experienced and well trained clinician and the findings were used to identify a suspected infection.
We emphasized and made sure that all criteria that could be explained by another condition were not used to make a clinical diagnosis of sepsis. Other tests
Blood cultures were not carried out due to resource limitations however we drew inferences from complete blood counts, chest x-rays and other surrogate diagnostics.
It is unclear how a mid-stream fresh urine sample was collected in critically ill patients with sepsis. Did some patients require catheterization?
Thank you for this important observation, indeed some patients especially the very ill ones had to be catheterized, all patients who were catheterized consented to have the procedure done.
Timing of samples (at admission, within 24hrs) is not documented.
Thank you for the observation we have documented the timing and the line on Pg.4 now reads “For patients with a raised serum creatinine (defined as a 0.3mg/dl (26.5umol/L) or more raise above the upper limit of the standard reference range), we repeated the
creatine test before 48 hours after the first test had elapsed to demonstrate rapidly changing values"

The line "Out of the remaining 62, 13 died and 49 survived to discharge making the in-hospital mortality among patients with sepsis 21% by 2 weeks" on page 6 is inaccurate and needs to rewritten.

The line has been rewritten and now reads “Out of the remaining 62, 13 died and 49 survived to discharge making the in-hospital mortality among patients with sepsis related AKI 21%.”

Correct typographical errors:

Line "luck of finances since both are quite costly and majority of patients were not on any insurance schemes and especially for the ICU, space was not available due to the limited number of beds."

" on page 6.

Done

Line "Our demonstrates that prevalence of acute kidney injury among patients with sepsis is significant and factors including elevated white blood cell counts, age and a postural drop in blood pressure are important pointers to a" on page 6.

Done

The comparisons in the 1st two paragraphs on page 7 are irrelevant. The manuscript 'Epidemiology of acute kidney injury in Africa' (PMID 18620957) would be a good starting point. The same is true for subsequent comparisons in the discussion.
Comparisons have been edited and the manuscript as well as others have been utilized as advised.

Unclear what the term persistent kidney injury means and how it relates to outcomes. Why was a two week period chosen?

Thank you for this important observation we appreciate that this is not a standard term and have revised the manuscript and used persistently elevated creatinin in place of persistent kidney injury.

A two week follow up period was chosen for practical considerations and resource availability. An ideal period would have been three months to assess for development of chronic kidney disease.

The authors editorialize extensively. Discussion needs to be rewritten, personal interpretations or opinions removed.

The discussion has been rewritten as advised.

The conclusion repeats the study result section and needs to be rewritten.

Conclusion has been rewritten as advised.

**Level of interest:** An article of insufficient interest to warrant publication in a scientific/medical journal

**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
Reviewer 2

Reviewer's report

Title: Acute kidney injury among adult patients admitted with sepsis in a low income country: Clinical pattern and short term outcomes.

Version: 2 Date: 3 July 2014

Reviewer: Fredric Finkelstein

Reviewer's report:

This is an important paper that addresses an issue that is getting much attention recently -- the incidence and outcomes of patients with AKI. There is little published data on this from the developing world and therefore this is most important and makes a valuable contribution..

The methodology is excellent particularly in light of the limited resources available to the authors, as noted by the authors in the discussion. A few minor suggestions:

1. the last line on p 5 needs clarification where the authors refer to "a urine output"

   Clarification has been made line now reads “...and a urine output of 0.6-2.4 mls/kg (CI; 10-0.40: p: 0.001).”

2. on p. 6 the authors should define what they mean of "eligible for ICU admission and dialysis"

   Clarification has been made, now reads “Out of the 13 patients who died 12 (92%) had AKIN stage 3 and were eligible for ICU admission and dialysis but got neither. Patients were considered eligible for ICU admission if they had single or multiple organ failure..."
refractory to conservative management while all patients with renal failure refractory to conservative management are considered eligible for dialysis.”

3. on p 7, second paragraph-the authors should clarify that their study is not at all comparable to the Chinese or South African studies and that they are looking at a completely different population of patients. The importance of their findings is that they have defined a clear group of patients and are documenting the incidence of AKI.

Clarification has been made now reads “Our study is not comparable to AKI prevalence studies done in China by Fang et al 2010, prevalence of 3.16% in the general hospital population or Friedricksen et al in a survey of ICU admitted adult patients, prevalence of 23.2%, majorly because of the difference in patient populations studied.”

4. on page 8, the authors need to clarify again that their study is looking at a completely different population than the studies in Germany in by Jose. In the present study, the mortality rate is what it is primarily because no dialysis or ICU is available to the very ill patients.

Thank you very much for you very insightful comments. This section has been appropriately edited.

Level of interest: An exceptional article

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:

no