Reviewer’s report

Title: Incidence, aetiology and outcomes of obstetric-related acute kidney injury in Malawi: a prospective observational study

Version: 0 Date: 08 Aug 2017

Reviewer: Austin Stack

Reviewer’s report:

Incidence, aetiology, and Outcomes of Obstetric related AKI in Malawi: a prospective observational study.
Cooke et al:

This is an interesting and important study that describes for the first time the epidemiology of AKI in Malawi, within a large teaching hospital. Using a prospective study design, the authors show that AKI incidence is high and far greater than rates in developed countries (comparisons with Canada), most commonly related to preeclampsia disorders, and that the majority recover without significant sequelae (84.6%). The manuscript is well written and is strengthened by the range of maternal and fetal outcomes that were studied. The discussion is balanced with appropriate reference to strengths and weakness.

Threats to Validity

1. Definition of Chronic Kidney Disease

The definition of abnormal kidney function (Scr > 82 µmol/L) seems somewhat arbitrary even among in the obstetric field and needs further clarification. Please provide a more robust justification. The authors mention the deficiencies of GFR and lack of validation, but given that the GFR has been validated extensively in many populations, both health and diseased, it might be prudent to consider its use in this study. A recent paper by Piccoli et al (Clin J Am Soc Nephrol. 2010 May; 5(5): 844-855) argued the case for the Cockcroft and Gault formula ("The choice of Cockcroft-Gault was motivated by the consideration of maternal weight in the formula, thus partially adjusting for very low or very high weight. This was considered of importance in a setting such as Italy where low weight is common in women, but severe obesity is increasing. The MDRD formula was also applied, and the cases shifting from one stage to another were analyzed"). The authors should provide appropriate rationale for their decision.

2. Exclusion of Patients with "apparently normal" kidney Function (Scr < 82)

It would have been useful if these pregnant women were also included to assess whether or not they developed AKI, as they serve as the parallel control group in the cohort design. I suspect that within this group there may have been pregnant women with low BMI values and corresponding low serum creatinine values. These may have been prone to AKI episodes but were not captured due to the "arbitrary serum creatinine threshold" of 82µmol/L.
Minor Comments

Please insert reference to Table 4 in Results section.

**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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