Reviewer's report

Title: Risk factors for community-acquired Acute Kidney Injury in patients with and without chronic kidney injury and impact of its initial management on prognosis: a prospective observational study

Version: 0 Date: 19 Jul 2017

Reviewer: Bjorn Meijers

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Patients with an eGFR less than 60 mL/min/1.73 upon admission to the emergency department were screened for changes in creatinine levels. Why only patients at eGFR below 60 mL/min? A drop in eGFR from 120 to 60 mL/min would signify serious AKI, but appears to be ignored?

Although the authors claim to have performed a prospective study in patients presenting at the ED and report mortality data after one and three years, the outcome data were not derived from prospective follow-up, but from community registry data. Please provide more data to define data quality. There must be some migration and thus loss of follow-up. How was this taken care of?

Causes of AKI were adjudicated as renal/prerenal/postrenal. Only a minority of cases appear to be adjudicated as renal AKI. Please clarify adjudication rules.

In general, please describe the workings of the group of nephrologists responsible for case review. How many nephrologists in total, how many nephrologists reviewed individual cases, what was the procedure in case of disagreement between nephrologists.

Did the authors explore outcomes as a function of severity of AKI?

In the introduction, the authors refer to a study stating that Aki is a frequent disorder with an incidence of 400 cases per 100000 persons (or 0.4%). In their study on the ED of the Geneva university hospital, a tertiary reference center, the observed incidence is 4%. Please elaborate on this quite discrepant incidence rates. Does this point to selection bias?

The authors used modified KDIGO criteria. Why not use the original KDIGO criteria? Please clarify the interested reader to the exact modifications.
The authors looked at changes in serum creatinine and urinary output to diagnose AKI. What percentage of diagnoses were made based on serum creatinine values and what percentage based on urinary output data. What was the delay between presentation at the ED and the diagnosis of AKI based on serum creatinine vs. urinary output data?

Minor essential revisions

Patient characteristics are reported as mean ± standard deviation (see Table 1). When assuming a normal distribution, a mean age of 79.5 and a SD of 12.8 in patients having acute or chronic kidney injury, this would imply that about 2.5% of cases were 105 or older at time of presentation at the ED. Unless one in forty patients belongs to the extremely old, it seems wise to provide median plus interquartile range.

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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