Reviewer's report

Title: Factors associated with residual urine volume preservation in patients undergoing hemodialysis for end-stage kidney disease, in Kinshasa Short title: residual urine volume in hemodialysis

Version: 0 Date: 08 Dec 2016

Reviewer: Jochen Raimann

Reviewer's report:

The current manuscript is a retrospective study conducted in data of 25 patients undergoing a thrice-weekly HD regimen. The authors aimed to determine factors associated with preservation of residual renal function by stratification of patients into those with a decline less than the median decline at the investigated time point. Using this as a binary outcome they employed logistic regression (by building 3 different models) to determine factors associated with the preservation of RRF (according to their definition for the analyzed time-point). While in principle an interesting analysis in a population not well characterized thus of interest for publications, some major problems need to be addressed.

1) Language: the paper needs to be revised in much detail in terms of language; also some terms used such as "protidemia" or "creatininemia" (amongst several other repeatedly used terms) are not appropriate. I encourage the authors to ask for help by a native English speaker or some professional editing services.

2) Logistic regression: I understand what the authors tried to do, however, I don't think this is the most appropriate way to do so.

a. The definition of decline in RRF should be the same for all time-points and not be based on the median (but clinical relevance - which renders either magnitude appropriate).

b. The multivariate analysis at HD initiation should predict RRF as a continuous variable (in a multivariate regression analysis)- it's not entirely clear what the dependent variable was in that analysis and what model was build.

c. The covariates should be the same for all models - I am not sure why the authors used different covariates for all models. It was not a stepwise approach based on the large p-values found for some of the included parameters. Please base the choice of covariates on a careful selected set of variables (i.e. the predictors determined by Janssen et al. 2002).
d. Overall the entire analysis should in my humble opinion be analyzed with 1) the outcome RRF as a continuous variable and 2) by construction of longitudinal models (i.e. a linear mixed effects model in the whole population that uses each patient's initial RRF value as the random intercept and the time-point of RRF measurement as a random slope) - using this approach would allow the most meaningful interpretation of the authors' data.

3) Hyper/hypovolemia: How were these measured and assessed? Please indicate this in much detail since this is a controversial topic and needs careful evaluation.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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:

Not suitable for publication unless extensively edited
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