Reviewer’s report

Title: Laboratory and dialysis characteristics in hemodialysis patients suffering from chronic itch - Results from a representative cross-sectional study

Version: 0 Date: 22 Aug 2015

Reviewer: Marisa Battistella

Reviewer's report:

This study investigated 860 HD patients from a representative randomly selected cluster-sample considering the regional distributions of dialysis units in Germany. This group found that diabetes was the only comorbidity that was associated with the occurrence of itch but interestingly with less CI. Except for creatinine, phosphorus, and parathormone, there were no significant associations between the occurrence and characteristics of CI and any laboratory value. Kt/V was not associated with the presence of CI. Patients dialyzed with polyarylethersulfone-membrane showed significantly more CI in all prevalence estimates and those dialyzed with polysulfonemembrane were significantly less affected by CI.

Overall this was a well written paper. I have few suggestions

1. Reference 14 does not have a date. Also you may want to mention if this study was validated.

2. You measured many lab values, kt/V etc. What about medication use? If not measured, then this should be addressed in the limitations section. Meds that could cause itch and more importantly if meds were used to treat itch.

3. My biggest concern- tables- I am not sure why total number is shown in the last column. I think it is more interesting to show a yes or no and whether this was statistically significant. Perhaps the last column can show the p values?? For instance- I am confused by your diabetes results-is there a way to show this differently?

Overall the data is presented nicely and is important data to share with the nephrology community. Congratulations.

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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