Author's response to reviews

Title: Association between sleep quality and cardiovascular damage in pre-dialysis patients with chronic kidney disease

Authors:

Jun Zhang (zj.ncjx@163.com)
Cheng Wang (wczg@medmail.com.cn)
Wen Yu Gong (gongwenyugz@qq.com)
Hui Peng (elizapeng10@gmail.com)
Ying Tang (ty.102@163.com)
Cui Cui Li (hnlicuicui@126.com)
Wen Bo Zhao (bobo800101@foxmail.com)
Zeng Chun Ye (yzchun9@163.com)
Tan Qi Lou (34750773@qq.com)

Version: 3 Date: 7 June 2014

Author's response to reviews: see over
Dear Miss Maria Merrie Jul Ladag and Dr Eric Cohen:

Thank you very much for your comments and suggestion from the editors and reviewers. We are very pleased to re-submit the manuscript which has been revised according to the reviewers’ comments. The comments of the reviewers are very constructive and valuable. The changes of manuscript are shown in yellow colour. We also revised language with the help of Elsevier WebShop team (English Language Editing).

For the reviewer #1, his/her comments and suggestions are in bold and our corrections/feedbacks are in red italics:

**Reviewer’s report**

**Title:** Association between sleep quality and cardiovascular damage in pre-dialysis patients with chronic kidney disease

**Version:** 2  
**Date:** 1 May 2014

**Reviewer:** Dawn Wolfgram

**Reviewer’s report:**

Major Revisions

Abstract:

1. E/A ratio needs a definition, as does "P". Would prefer that all abbreviations in the abstract are first spelled out

**Answers:** Thank you. All abbreviations in the abstract were spelled out according to your suggestions!
2. please add mean eGFR for the cohort

*Answers: We have added the median eGFR in the abstract according your suggestions!*

3. your study does not imply that "improvement in sleep quality might reverse this abnormality..." that is too far a conclusion and should be removed from the abstract.

*Answers: Thank you for your advice. We deleted the sentence.*

**Introduction:**
no major concerns

**Methods:**
1. page 5 line 25 define "course of disease ",

*Answers: Thank you. In this study, it should be “duration of CKD”. I have replaced it in the manuscript.*

2. Page 4 line 24-page 5 line 5 is discussing results, and this should be moved to the results section. A figure or table may be appropriate.

*Answers: Thank you. We have revised this part and added a table (table 1) according your suggestions!*

3. Add the range for the PSQI score, is 5 midway between the min and max?

*Answers: We have added the range of the PSQI score according your suggestions! (page 4, line 24 – 28)*

4. page 6 line 13-16. This sentence is difficult to understand and needs to be reworded for clarification.

*Answers: Thank you. We have revised this sentence. (page 6, line 14-17)*

5. starting on page 6 the statistical analysis describes all the different dependent variable and all the independent variables and seems repetitive. This can likely be shortened since the independent variable remain the same, as far as I can tell.

*Answers: Thank you. We have revised this paragraph.*

6. Address why eGFR was a continuous variable in most models except when looking at LVH.

*Answers: Yes it is. In Linear Regression model (table 3 and table 5) variables were used as continuous variable, when logistic regression analysis (table 4) we used binary variable (eGFR≥60 ml/min/1.73 m² vs. eGFR<60 ml/min/1.73 m²).*
7. Since depression (BDI score) and age were significantly associated with sleep quality I would include those in all your multivariate models

\textit{Answers:} Yes, BDI score, age and sex have been included in all multivariate models. However, BDI score has no association with LVH and E/A ratios.

Results:
1. what is urine acid, this is not well defined.
\textit{Answers:} Thank you very much for pointing out our error. It should be “Serum uric acid” and the unit is “ummol/L”. We have we have revised in the manuscript.

2. CIMT is not defined (for what I could find), not sure what this is referring to
\textit{Answers:} Thank you, the full name of CIMT is Carotid intima-media thickness. We have added it in the manuscript. (page 5, line 26 – page 6, line 5)

3. The tables should have p-values for all the variables included in your multivariate model not just the ones that were significant.

\textit{Answers:} Thank you very much for pointing out the potential problems in previous description. In the multivariable analyses, we used stepwise (for linear regression in Table 3 and table 5) or backward (for logistic regression in Tables 4) to explore the independent association between dependent variables and independent variables. By the stepwise or backward method, those independent variables without significant associations with dependent variable would not be included into the final model and their p value was not available. We revise the description for clearer understanding.

Discussion
1. Limitations should include the low specificity of your sleep form.
\textit{Answers: We added this limitation.}

2. the low overall age should be a limitation since most CKD populations are older and sleep problems from people in the 20-40s may be very different from those in the 50-70s.
\textit{Answers: We added this limitation.}

Minor:
Introduction
1. line 17 "a previous study found that poor..." is only for CAPD patients, would
replace with study on ESRD in general or HD patients.

Answers: Thank you. Until now, there was no other study showing a relationship between PSQI and CVD in ESRD or HD patients. In that study, they only recruited CAPD. In keeping with the original result, we would like to keep using the same term with that study.

2. Would overall get some editorial feedback on the writing.

Answers: The manuscript have been edited by Elsevier WebShop team (English Language Editing)

Results:
1. page 8 line 5 there appears to be a mistake in the BDI score since 1 is not higher than 4.

Answers: Thank you very much, in the manuscript “(1 (0-2) vs. 4 (2-8)); p<0.001)” should be “(4 (2-8) vs. 1 (0-2); p<0.001)”. We revised it in the manuscript. (page 8, line 14)

Discussion
1. type on page 9 line 22 "BID"

Answers: Thank you, We have revised it as BDI.

2. page 10 line 27-28. How are you concerned that reporting bias will affect your results? concerned that people overreported or under-reported and why?

Answers: Thank you. Usually, patients with sleep problems will overestimate their sleep difficulties. We elaborate this phenomenon in the discussion section. We have revised this part.

For the reviewer #2, his/her comments and suggestions are in bold and our corrections/feedbacks are in red italics:

Reviewer’s report
Title: Association between sleep quality and cardiovascular damage in pre-dialysis patients with chronic kidney disease
Version: 2
Date: 15 May 2014
Reviewer: Randy Luciano

Reviewer’s report:
Zhang et al present an article entitled “Association between sleep quality and cardiovascular damage in pre-dialysis patients with chronic kidney disease”. This is an extremely well analyzed study. The high prevalence, albeit in a population of Chinese CKD patients, make the findings relevant for the nephrologist and general internist. There are no major compulsory revisions or discretionary revisions. I only have a few minor revisions.
1. page 8, line 20: States that “Figure 1 shows that the non-LVH patients had higher PSQI scores when compared with the LVH group”. I believe, based on the figure, it should state the LVH group had higher PSQI scores when compared to the non-LVH group.

   Answers: Thank you very much, it is an error in expression, we have revised it. (page 9, line 1)

2. Page 9, line 22 – states BID< but should be BDI.

   Answers: Thank you very much. We have revised it as BDI.

Please do not hesitate to contact us if there are further issues which need addressing.

Yours sincerely,

Jun Zhang and Tanqi Lou