Reviewer’s report

Title: Relationship between drug application and mortality rate in Chinese older coronary artery disease/chronic heart failure patients with and without low glomerular filtration rate

Version: 0 Date: 14 Oct 2018

Reviewer: Serban Maierean

Reviewer’s report:

Dear Authors,

Thank you for submitting your paper to BMC Pharmacology and Toxicology. It was a very interesting and pleasurable read. Below you will find some comments I have regarding the paper:

1. As the definition of CKD mentioned in your paper included only those patients with a GFR < 60 mL/min/1.73, it is important to note that KDOQI guidelines further define CKD as "kidney damage for 3+ months, as defined by structural or functional abnormalities of the kidney, with or without decreased GFR…” This includes patients with GFR > 90 (Stage 1 CKD), and GFR 60-89 (Stage 2 CKD). Therefore, generalizing conclusions to all CKD patients may be inappropriate.

2. Average survival of an 85-year old adult with a GFR of 47.2 (your cohort's average) is around 2.5 years for both males and females, and it is likely lower in patients with comorbid CHF and/or CAD. In contrast, a 75-year old male and female patient with similar GFR can expect to live 6.2 and 7.9 years, respectively. For reference, in the general population an 85 year old man can expect to live another 7.9 years, and woman 5.8 years. (Neild 2017, PMID: 27115888). As such, the latency period over which statins, for example, reduce mortality may not be reached in this patient cohort. As with point 1, generalizability to younger patient populations may be an issue regarding your study's conclusions. Your paper does specify "older patients". However, the abstract says patients aged 60 or older were included but average age in your cohort is 85 with an interquartile range of 81 - 89. I feel it may be easier to read your paper in context if you specify the aforementioned both in materials AND as a part of your conclusion, as opposed to saying "older" patients. You may also consider it useful to stratify your cohort by age in your analysis.

3. Your study found that antiplatelet therapy did not lead to improved survival in patients with CAD and comorbid CKD. Could this be partly explained by the uremic-induced platelet dysfunction inherently seen in patients with CKD? If yes, I feel it may be useful to briefly discuss this in your paper's 'discussion' section.

4. I feel that it may be useful in aiding reader comprehension and flow to have the paper re-edited for grammar and syntax.

I hope these will be useful to you in revising this paper, and I wish you the best of luck in its publication.
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.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

Quality of written English
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Needs some language corrections before being published

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