Reviewer’s report

Title: The COMT-polymorphism is not associated with the incidence of acute kidney injury after cardiac surgery - a prospective cohort study

Version: 0 Date: 22 May 2017

Reviewer: Kathleen Liu

Reviewer’s report:

In this paper, Oezkur and colleagues examine the association of the COMT-polymorphism with AKI after cardiac surgery. The COMT rs4680 polymorphism had previously been associated with AKI. However, in the current analysis, AKI rates were lowest in the Met/Met genotype, which had previously been associated with AKI. The study is modestly sized and consequently underpowered, though the investigators stated they stopped the study when it was evident that they would not detect AKI with an association of the magnitude they had hypothesized (a reasonable approach). However, I think that given the one positive study in the literature, it would be important to publish this study, with some further analyses:

1. What proportion of AKI was defined based on creatinine criteria versus urine output criteria? What were the rates of AKI in the 3 groups defined either one or both?

2. Given the small numbers, what are the confidence intervals around these proportions in the 3 groups?

3. The Haase-Fielitz study used a 50% rise in SCr over 5 days to define AKI. It seems like this was the only positive study of the 3 described. What was the rate of AKI defined in as in the Haase-Fielitz study in the current population, and is there enough power to detect differences?

4. It seems like some of the references are reversed on Page 12. Line 7: It is not the Val/Val but rather the Met/Met genotype that is associated with AKI in the prior work, correct?

5. Page 12, Line 20: Again, the hypothesis was that the Met/Met, not the Val/Val genotype, was associated with AKI?

Minor grammatical points:

1. Page 11, Line 5 "colloidal infusions were exchanged by crystalline" should be rephrased

2. Would avoid starting sentences with "Especially"

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:

Needs some language corrections before being published

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