Reviewer’s report

Title: Glucose-insulin-potassium improves left ventricular performances after aortic valve replacement: secondary analysis of a randomized controlled trial

Version: 0 Date: 13 May 2019

Reviewer: Benedikt Preckel

Reviewer's report:

This is a well written paper on the effects of GIK infusion at the beginning of the operation on LV function parameters measured by TEE in „moderate-to-high risk" patients undergoing cardiac surgery for Aortic Valve Replacement either as single surgery or combined with Coronary artery bypass surgery.

The authors nicely describe positive effects of GIK infusion on LV, as well as on secondary outcome parameters.

As the authors state correctly, this is a pre-planned secondary analysis of a recently in Anesth Analg (2018) published study.

While comparing the results with those of the previously published paper, I came along this recent publication of the same group which is not cited within the current manuscript:

Pre-treatment with glucose-insulin-potassium improves ventricular performances after coronary artery bypass surgery: a randomized controlled trial.


I was wondering whether at least part of the data shown in the present manuscript (AVR+CABG patients) have also been published in this previous paper (as CABG+AVR patients).

I could no-where in the present manuscript find any in- and exclusion criteria for the current and the recently published manuscript. Thus, I have the impression as of the data are splitted, thereby using some of the data in both manuscripts.

The authors should clearly state which patients were included in which pre-planned sub analysis.

The methods section needs more details regarding secondary endpoints (if authors would like to keep these end-points within the manuscript): composite of cardiovascular, respiratory complications needs to be described, how was ICU stay and in hospital stay measured.
In my opinion, these secondary end-points should be omitted from the manuscript, as these data have been published previously in the main manuscript, and it is doubtful whether analysis of these secondary endpoints in this small cohort of the secondary analysis is adequate.

I suggest to delete page 8 LM 37-42.

The number of the ethical approval should be mentioned in the method section.

Page 5 LM 51-53 should read 4 CH and 2 CH

Page 10 LM 27: RVA should read AVR

**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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None

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