Reviewer’s report

Title: Preoperative uric acid predicts in-hospital death in patients with acute type A aortic dissection

Version: 0 Date: 29 Oct 2019

Reviewer: Mate Petricevic

Reviewer's report:

Dear authors

Thank you for submitting this manuscript to the JCTS. I was pleased to receive it as a reviewer.

# Objectives of the paper and importance of the research question

The present study aimed to evaluate the value of admission serum uric acid (UA) level in predicting in-hospital risk of death in patients with acute type A aortic dissection. There is a lot of evidence available when it comes to the UA levels and cardiovascular mortality. However, the evidence is rather conflicting. Here, we analyze the same biomarker in the group of patients undergoing urgent surgery. I would approach to such a research cautiously for two reasons: 1) Even if there is some association the question is why to analyze such an association if there are some meta-analyses available and provide the evidence on the UA and cardiovascular mortality. 2) What should we do with these results? How should we improve our clinical practice based on these results? When it comes to the aortic dissection, there are few known strong predictors of mortality. The question is how these results would add on the top of what we already know and how should we improve our practice having these results on mind?

# Methods

This is retrospective study evaluating 186 pts undergoing aortic dissection surgery. I understand this is a retrospective observational study, however, power analysis should be done and sample size should be calculated so to give us an answer whether our database has enough patients to address our research question? This study has a particular focus on the subgroup of patients that underwent "total arch replacement". Therefore, we need to know if the study is adequately powered for analyses authors performed.
# Results

How would authors explain that UA was associated with higher mortality in arch surgery, but that was not the case for ascending aorta? Again, the power analysis may actually give the answer.

# Discussion

Discussion is well researched, however, serious methodological drawbacks are not addressed.

**Level of interest**

Please indicate how interesting you found the manuscript:

An article of limited interest

**Quality of written English**

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal