Reviewer's report

Title: Protocol of supra-visceral aortic ischemic preconditioning for open surgical repair of thoracoabdominal aortic aneurysm.

Version: 0 Date: 23 Jun 2020

Reviewer: Alexander Gombert

Reviewer's report:

COMMENTS FOR AUTHORS:

Very interesting study, I'm looking forward to see your findings.

Abstract:
I would recommend a more specific definition of the endpoints in both groups, already in the abstract. "pulmonary and renal" morbidity cannot be measured or assessed appropriately, AKI according to KDIGO and pneumonia/prolonged ventilation-time/tracheotomy could be better endpoints. The secondary objectives are kind of mixed up; it should be cardiac complications within 48 hours (why such a short time?), renal and pul. Complications within 21 days (why did the authors chose this interval?).

I would recommend starting with the description of the statistics (power calculation etc) and then describe your protocol. □ 33-42 before 18-31

44: lessen □ reduce; at first you were talking about renal and pulmonary complications which are both related to dysregulated inflammation following open TAAA repair, that's right. Yet I would recommend keeping things straight: how will you measure inflammation? Biomarker? Solid endpoints such as AKI; pneumonia?

Intro:
4: how frequent? Up to 50% and more, maybe you could add a reference for that.
24 ff: here you could mention the potential relevance of DAMP's for lung injury, as described in trauma patients.

44: to reduce cardiac…

58 concerned □ involved in aortic reconstruction and by that ischemia - reperfusion damage….

Page 4, line 16: Be more moderate here: IPC may be a useful tool…rather than is a powerful tool

Methods
Please explain your time intervals, why 48h hours for cardiac complications, why 21-days? Please elaborate this aspect and add references if possible.
Cardiac morbidity: What will you do in case of decreased kidney function when troponin is not measurable/ reliable?

Which kind of TAAA surgery? Type 1-5 according to Crawford/SAFI?
Hybrid repair?
Infectious aneurysm?
Marfan or other CTD patients?

Trial intervention:
Aneurysms are often shaggy, with a lot of debris Thrombus/calcification. What will you do in case of embolization? Will you assess this aspect in your study too?
Please refer to the current ESVS guidelines for DTA pathologies as a reliable source of information for DTA treatment.

Table 1,2:
Please be more specific in your tables:
- Intervention time in minutes?
- Aortic clamping in minutes?
- Peroperative perfusion- please explain
- How will you assess bleeding?

You need to elaborate your surgical strategy during open TAAAA repair:
1. Will you apply distal perfusion by heart-lung machine?
2. Selective viscero-renal perfusion?
3. Renal perfusion with cardioplegia solution/Custodiol?
4. Will all involved centers apply the same strategy? This seems crucial to create comparable results.
5. Don't you assess CRP, IL-6, PCT, leucocytes and further biomarkers?

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Yes
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

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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:

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