Author’s response to reviews

Title: RhoA/Rho-Kinase, Nitric Oxide and Inflammatory response in LIMA during OPCABG with Isoflurane Preconditioning

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Author’s response to reviews:

Dear editor,

On behalf of my co-authors, we thank you very much for giving us an opportunity to revise our manuscript. We appreciate the editor and reviewers very much for their positive and constructive comments and suggestions on our manuscript titled “RhoA/Rho-Kinase, Nitric Oxide and Inflammatory response in LIMA during OPCABG with Isoflurane Preconditioning”(ID: JCTS-D-18-00110).

We have studied the reviewer’s comments carefully and have made revisions, which are marked in underlines in the paper. We have tried our best to revise our manuscript according to the comments. Please find the revised version attached, which we would like to submit for your kind consideration.

We look forward to hearing from you.

Thank you and best regards.

Yours sincerely,

Jun Ma
Dear Editors and Reviewers:

Thank you for your letter and for the reviewers’ comments concerning our manuscript titled “RhoA/Rho-Kinase, Nitric Oxide and Inflammatory response in LIMA during OPCABG with Isoflurane Preconditioning” (ID: JCTS-D-18-00110). The comments are all valuable and have been very helpful for revising and improving our paper, as well as for refining the overall significance of our study. We have studied the comments carefully and have made corrections that we hope will meet with approval. The revised portions are marked in underlines in the paper. The main corrections in the paper and the responses to the reviewer’s comments are as follows:

Reviewer 1's comments:

1. I would like to see a flowmeter with measures that could give simpler data and goals for reading. A Doppler system is simple and inexpensive.

Response: Thank you for your suggestions. Transit time flow measurement (TTFM) given important and accurate intraoperative information about the status and patency of coronary grafts. It enables technical problems such as kinked, twisted, or stenotic grafts to be diagnosed accurately, thereby allowing prompt revision of the constructed grafts before the patient leaves the operating room. The studies of D’Ancona et al [1] and Walpoth et al [2] have reported that in 6—8% of all patients a technical failure can be diagnosed with TTFM and resolved during the same operation. This is of great benefit for the patient avoiding unnecessary perioperative complication.

The same as the reviewer's comments, we believed that flow parameters in TTFM were very important indicators. Therefore, when we initially collected data from the trial, mean flow (MF) and pulsatility index (PI) of the LIMA graft were measured by TTFM. However, there were no significant differences in terms of MF, PI values between the two groups. The statistical design is shown in table 1. Then, we checked the literature and found that, flow parameters in TTFM were dependent on many variables including blood viscosity, the size and quality of the graft, resistance in the graft, the quality of the outflow bed, the size of the native coronary artery and spasms in arterial grafts[3]. Because some of these variables were related to patient's own vascular characteristics and cannot be controled by us in our experiments, in addition, the main indicators in our experiments were only part of the influencing variables. The above discussion may be the reason why there is no statistical difference between the two groups. As you suggested that we have added this part of the data to our manuscript.
Table 1 MF, PI values between the two groups

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<th></th>
<th>group Iso</th>
<th>group P</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MF(l/min)</td>
<td>37.3±12.3</td>
<td>31.3±10.6</td>
<td>0.199</td>
</tr>
<tr>
<td>PI</td>
<td>2.2±0.9</td>
<td>1.9±0.6</td>
<td>0.146</td>
</tr>
</tbody>
</table>

References:


Reviewer 2's comments:
1. In the title, there seems to be some words missing after "inflammatory", such as "response" or "activity".
   
   Response: Thank you for your suggestions. As your suggested that we have added the phrase "response" in the title.

2. In the discussion, some articles mentioning the synergistic effect of propofol in association with isofluorane in terms of decreased inflammation could be mentioned and debated, such as the following

Response: Thank you for your suggestions. As your suggested that we have added the synergistic effect of propofol in association with isoflurane in terms of decreased inflammation in the discussion section. It is our future research direction, we will explore the synergistic effect of propofol in association with isoflurane in LIMA during OPCABG in the future.

3. The image of the Supplementary Material is not necessary.

Response: Thank you for your suggestions. As your suggested that we have clarified this issue in the image of the Supplementary Material.