Author's response to reviews

Title: Left Pulmonary Artery Banding to Repair Ipsilateral Diffuse Pulmonary Arteriovenous Fistula

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Author's response to reviews: see over
Dear Editors and Reviewers,

Thank both you and the reviewers for your careful review of our manuscript entitled “Left Pulmonary Artery Banding to Repair Ipsilateral Diffuse Pulmonary Arteriovenous Fistula Patient.” The reviewers’ comments were very helpful in revising our manuscript. We have addressed the questions raised by the reviewers as follows: The revised words and sentences are highlighted by underlines in our revised manuscript. In addition, we have corrected the grammar and vocabulary of some sentences in terms of English. Furthermore, we added an author who was the second operator of surgery.

Below are our detailed responses to the comments of the reviewers:
Reviewer's report:

Reviewer: Kenta Nakamura

Reviewer's report:
Major Compulsory Revisions:
None

Minor Essential Revisions
1) Include in the discussion, the risks of complete main pulmonary artery occlusion.

Complete left pulmonary occlusion and following pulmonary artery embolism will lead to massive necrosis which probably cause a lot of cytokines and chemicals release. This must make our patient unstable. In addition, if we occlude the left pulmonary artery completely, we are obliged to give up the possibility of left lung transplantation. We added the risk in the “Conclusions” section. (Page 10, line 1-5)

2) Discuss the generalizability of your case (i.e., how common/unique is unilateral diffuse PAF?)

Actually, diffuse pulmonary arteriovenous fistula is extremely rare itself. We added the discussion in the “Conclusions” section. (Page 9, Line 4-5)

3) Given presentation of hematemesis and convulsions, was the patient noted to have brain an gastroenterological AVMs? Does he meet the diagnostic criteria for HHT?

AVMs could not be found in his brain assessed by MR angiography. However, gastroenterological AVM has not been investigated yet. As hematemesis was result of bleeding from lung, we changed the word “hematemesis” to “hemothysis.” (Page 6, Line 3, 16)

About HHT, we think that he did not meet the diagnostic criteria for HHT. Especially, repeated epistaxis, family history and genetic factor were not clear in this patient.
4) Please clarify the author contributions as it is not clear whether the first authors TH and KA participated in conceptualizing and writing the manuscript.

As you mention, it is unclear about the author contribution in the first two authors. We removed the sentence.

5) Various, minor grammatical errors were noted throughout the manuscript, specifically:
   a) Conclusion, 3rd paragraph: "However, both patients reported previously were not performed PAB as severe condition as our patient."
   b) Case, last paragraph, last sentence: "... but hi is able to..."

Thank you for letting us know. We have changed them.

Discretionary Revisions:
1) Propose a guideline to which PAB should be considered for PAF (e.g., bridge to transplant or palliative intervention, unilateral PAF, etc.)

We propose PAB is a palliative intervention as bridge to transplantation. We added our propose in the “Conclusions” section. (Page 10, Line 12-13)

2) Provide further details or reference of the PAB procedure

We added detailed PAB procedure in the “Conclusiona” section. (Page 9, Line 18-Page 10, Line 1)

Reviewer: Marwan M Refaat

Reviewer's report:
This is an interesting case report by Hirata et al about left pulmonary artery banding that rescued a patient with diffuse pulmonary arteriovenous fistula. The article has many grammatical mistakes but merits publication.
Thank you for reviewing our manuscript generously. We corrected all of them.

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**Reviewer:** Toru Iwasa  
**Reviewer's report:**

**Minor Essential Revisions:**

1. The authors mentioned "ipsilateral pulmonary artery banding (PAB) is effective." but in this case, I think, isolation of left pulmonary artery is also useful and seems to be standard surgical intervention. Why the authors chose the ipsilateral 'PAB' and, what is more effective in ipsilateral PAB than ipsilateral pulmonary artery isolation? Please show the reason in the article.

As mentioned in the answer of the first reviewer, we chose PAB this time. We have addressed about the reason in the “Conclusions” section. (Page 10, Line 1-5)

2. The authors rescued the patient with Ipsilateral PAB, but in long term, a lot of minor aortopulmonary collateral aretries (mAPCAs) to left lung would develop and desaturation would occur in later period. This ipsilateral PAB (also ipsilateral pulmonary artery isolation) seems to be effective in short term and for limited patients. The authors should mention this limitation of this surgery for PAVF.

We do not think that mAPCAs lead further hypoxia because mPACAs are basically, artery to pulmonary artery shunt. And the long-term efficacy of unilateral PAB has not been reported yet. So, we cannot make a comment about this. However, as far as blood supply of left side lung through left pulmonary artery is restricted, the patient condition must be well. For this concern, we added a sentence in the “Conclusions” section. (Page 10, Line 13-14)

3. The more detailed PAB method is not written. After PAB, how was the outside diameter of PAB or maximum flow velocity of PAB portion in echocardiography?

4. In page 7 line 14, 'hi' is incorrect. 'he' is correct.

5. In page 6 line 11, "To improve quality of life (QOL)" is not seems to be suitable
for this case. "To improve daily activity" or "To improve activities of daily living" is more suitable.

6. In page 7, line 15, "enjoys good QOL" is not suitable. 'enjoys his daily life', etc is suitable.

7. In figure 3 legend. 'Discending Aortography' is incorrect. 'Descending Aortography' is correct.

8. In page 6 line 2-3 'A nine-year old boy was transferred emergently to our hospital with the chief complaints of hematemesis and convulsion in 2011.' and line 13-14, 'When he was nine years old, he was sent to our hospital emergently for hematemesis and convulsions.' means the same and redundant. Please delete either sentence.

10. In page 10 line 2, 'her mother' is incorrect. 'his mother' is correct.

Regarding of questions from 4-8, 10, we have changed as your recommended.

9. In figure 1 and 3, the shadow of one vascular embolization coil was seen at left lung field. Did this patient received previously coil embolization? This was not mentioned in the report.

We performed PDA coil embolization before, and we changed the sentences in “Figure Legends” section (Page 18, Line 3-4)

Reviewer: Babu Uthaman

Reviewer's report:

Major Compulsory Revisions:

1. The manuscript needs to be written in a more detailed and connecting way to give the reader a better picture of presentation, details of presentation, explanation for the presentation etc (hypotension, hematemesis).
We added more details in the “Case Presentation” section regarding his condition and vital signs.

2. The attached file will give areas of revision required to make it better. This is shown as "track the changes"

3. There should be comparison between pulse oximetry saturation, blood gas analysis arterial oxygen saturation and partial pressure od O2, as mentioned in 'the track the changes'

Thank you very much for you generous idea that we can check easily. We revised our manuscripts in accordance with your comments in the original manuscript.

4. Discussion needs to be written in a better and more informative way - explaining the procedure, comparing and contrasting the various procedures and advantage of PA band to other available options.

It is true that we should have written the points in more detail. We added some comments in the “Conclusions” section. (Page 9, Line 7-16), (Page 9, Line 18-Page 10, Line 1),

5. The legends should be written with details and findings should be mentioned - see the comments related to that in the 'track changes' in that area.

We revised our manuscripts in accordance with your comments in the original manuscript.

Minor Essential Revisions:
The language needs to be looked into in terms of appropriate words, sentences, clarity of expression, constructions as well as grammatical and spelling mistakes

We revised our manuscripts grammatically correctly as much as we could according to your comments in our manuscript. All corrected words and sentences are highlighted by underlines.
Thank you very much for your grateful comments. We believe that all comments must make our manuscripts much better. We would be grateful if you would consider our manuscript for publication in *Journal of Cardiothoracic Surgery*.

Sincerely yours,

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