**Author's response to reviews**

**Title:** Fulminant Myocarditis managed with Pulsatile Extracorporeal Life Support; use of Twin Pulse Life support (T-PLS(R))

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Dear reviewer

I sincerely appreciate your kind review and comments on my manuscript. Those are my reply to your questions.

1 in case one, the oxygenator was replaced as required, and in case two the oxygenator was replaced on the third, sixth, and ninth day. Please explain your policy. Is replacement related to thrombi, or to the pressure gradient over the oxygenator.

- The oxygenator was replaced when oxygenation function is not adequate. Our criteria was PaO2 below 100 when FiO2 of 1.0. We think this oxygenation dysfunction is occurred due to plasma leakage rather than thrombus formation inside of oxygenator. So, we didn't observe high pressure gradient across the oxygenator even when oxygenation is impaired.

2 The pulsatile T-PLS ejects into the femoral artery, while the left ventricle ejects into the aorta. Can you show the pressure waves in the aorta, and did you observe self synchronization of the two pumps, as proposed by the T-PLS company?

- Actually, T-PLS is not synchronized with native heart. However, as pulsatility decreases when T-PLS rate is weaned, we didn't have any trouble with simultaneous ejection of T-PLS and the left ventricle. When higher support is required, T-PLS makes higher pulsatility. But, during this severe heart failure status, usually native heart doesn't eject vigorously causing problem with
simultaneous ejection.

My answers to your questions are included in the manuscripts and colored red. I hope you are satisfied with my answers.

Thank you for your review again.