

ROUND 1

Dear Editors and Reviewers:

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "A patient who survived with ECMO after 1 hours of cardiopulmonary resuscitation: A case report" (World Journal of Clinical Cases NO:77633). Those comments are all valuable and very helpful for revising and improving our paper. We have studied comments carefully and have made correction which we hope meet with approval.

The main responds to the reviewer's comments are as flowing:

1. Response to comment: Cost effectiveness should Also be discussed.

Response: Expert consensus recommendation for adult extracorporeal cardiopulmonary resuscitation: For patients with cardiac arrest caused by reversible etiologies, traditional cardiopulmonary resuscitation cannot restore spontaneous circulation or patients cannot maintain spontaneous cardiac rhythm after repeated cardiac arrest. If patient and hospital conditions permit, timely use of ECMO to assist circulation and oxygenation may be considered. This patient had no serious underlying diseases. He suffered sudden cardiac arrest witnessed in the operating resuscitation room and immediately underwent cardiopulmonary resuscitation. The etiology was reversible and was in line with the indications for ECPR. Therefore, ECMO supportive treatment was given after comprehensive consideration and the

consent of the family.

2. Response to comment: Would you please kindly correct all your typos and grammar errors throughout the manuscript?

Response: I am very sorry for the typos and grammar errors in the manuscript. I have carefully revised it and obtained the manuscript language polishing proof.

3. Response to comment: Figure 1 is confusing in a sense why exactly the surgery was undergone. Please provide the optimal figure to deliver the message about indications for surgery.

Response: The patient had lumbar pain 10 days ago, and the pain radiated to the right hip, the back side of the right thigh and the back side of the calf. After rest, the pain was relieved, and it was aggravated by exertion. The patient was unable to walk normally. Physical examination showed lumbar tenderness, with obvious gap between L4/5 and L5/S1 and right lower limb straight leg raising test is positive. MR showed lumbar 3/4, 4/5 and L5 / S1 disc herniation. Combined with the patient's clinical manifestations and imaging examination, it is consistent with the indication of lumbar disc herniation surgery. Therefore, after excluding surgical contraindications, a posterolateral approach lumbar fusion + pedicle screw internal fixation + lumbar discectomy with laminectomy + nerve root canal lysis were performed.

4. Response to comment: Can you explain why your myocardial infarction is postoperative and not perioperative?

Response: Perioperative period refers to the period of time before, during and after a patient's surgery. About 5 to 7 days before the operation from 7 to 12 days after the operation, is a whole process around the operation. This patient belongs to perioperative myocardial infarction, but the myocardial infarction occurred after surgery, the term non-cardiac postoperative myocardial infarction is used in this article in order to emphasize the temporality and its status as a rare complication of non-cardiac surgery.

5. Response to comment: This is not clear how diagnosis of myocardial infarction was made. The existence of Concilium is great, but we do not see even troponin to appreciate it. Is that a MI type 2?

Response: Because the patient had sudden cardiac arrest after surgery, coronary angiography was performed immediately after ECPR, and the results showed that subtotal occlusion of the middle part of the left anterior descending artery (LAD). So the diagnosis was acute myocardial infarction. Due to the short time, the results of troponin were not reported at that time, and the troponin was reported later more than 80ng/ml. I am sorry that this key indicator was not included. I will add to it immediately. This is a MI type 2.

6. Response to comment: Why ECMO was exactly chosen? Is that routine procedure at your Clinic? Please provide the reader with the relevant information about Guidelines that were used to manage your patient. If you use whatever off-label, please explain and justify that choice.

Response: According to the consensus of the Extracorporeal Life Support Professional Committee of the Chinese Medical Doctor Association: for patients with cardiac arrest in the hospital, if the routine CPR rescue continues for 10 minutes and still fails to restore effective spontaneous circulation, and there is no contraindication to ECMO assistance, the ECPR rescue process can be started immediately. ECPR indications include cardiac arrest witnessed by a medical practitioner. This patient meets the above criteria, so we choose ECMO.

7. Response to comment: Figure 2: images are of the different cardiac cycle. Please do it in a matchable way.

Response: I'm sorry for my lack of detail. Figure 2 has been replaced with the same cardiac cycle image.

8. Response to comment: Can you explain the story with ACT?

Response: ACT means Activated Clotting Time of whole blood. By measuring the coagulation time of activated whole blood, the dosage of heparin anticoagulation and protamine antagonism can be adjusted in time. It is an objective and effective method to monitor blood clotting time in clinical cardiopulmonary bypass surgery, ECMO and so on.

9. Response to comment: Discussion: what is "was confirmed by SFAR-INSERM article published in late 2003"? Where is a reference?

Response: I am very sorry for not giving the corresponding reference, I will add the reference to the manuscript.

10. Response to comment: Discussion: References 6 and 7 are of low-quality research. Would you please kindly reconsider your Discussion with more good-quality research in there or more scientific vision of the story?

Response: I removed reference 6 and 7, added good-quality research, and reworked the discussion.

We appreciate for Editors/Reviewers' warm work earnestly, and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions. We are looking forward to hearing you soon.

Yours sincerely

Qian-qian Wang

2022-08-30

ROUND 2

1、 Please retitle the article. You are focused on POMI mainly. Would you combine the main idea of your case report in a new title?

Response: Thanks to reviewer's suggestion, the article has been retitled to "Survival of a patient who received extracorporeal membrane oxygenation after cardiac arrest due to postoperative myocardial infarction: a case report".

2、 Please incorporate all the remarks delivered in your rebuttal letter into the main text. Your answers are not for reviewers but for the readers. All the critical issues, especially regarding the Chinese vision of the clinical approaches, must be elaborated on.

Response: I am really sorry that I did not include all the reviewer's modification opinions in the main text in the first revision. I have revised it, especially to elaborate on the points concerning the Chinese clinical approach.

3、 The text now looks still like a mess without transparent logic. It feels like you have all the key info in the article, but it is not harmonized. Please, carefully evaluate the structure and content of the information, be focused.

Response: Thank you very much for reviewer's suggestion. I have already sorted out and adjusted the structure and content of this paper.