PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases
Manuscript NO: 71494
Title: Extensive myocardial calcification in critically ill patients receiving extracorporeal membrane oxygenation: A case report and literature review
Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed
Peer-review model: Single blind
Reviewer’s code: 00978063
Position: Peer Reviewer
Academic degree: MD
Professional title: Doctor
Reviewer’s Country/Territory: Australia
Author’s Country/Territory: China
Manuscript submission date: 2021-09-11
Reviewer chosen by: AI Technique
Reviewer accepted review: 2021-09-26 07:23
Reviewer performed review: 2021-09-26 08:10
Review time: 1 Hour

<table>
<thead>
<tr>
<th>Scientific quality</th>
<th>Grade A: Excellent</th>
<th>Grade B: Very good</th>
<th>Grade C: Good</th>
<th>Grade D: Fair</th>
<th>Grade E: Do not publish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language quality</td>
<td>Grade A: Priority publishing</td>
<td>Grade B: Minor language polishing</td>
<td>Grade C: A great deal of language polishing</td>
<td>Grade D: Rejection</td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td>Accept (High priority)</td>
<td>Accept (General priority)</td>
<td>Minor revision</td>
<td>Major revision</td>
<td>Rejection</td>
</tr>
<tr>
<td>Re-review</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SPECIFIC COMMENTS TO AUTHORS

The case described is of potential interest. However, the details supplied are very sketchy. For example, the case is of an adolescent with "fulminant myocarditis". What caused the myocarditis? Why was it necessary to treat the patient with ECMO? Why did the patient develop severe hypocalcaemia? With infusion of calcium to correct this, was there any overshoot? What happened to renal function? Could the authors please describe the state of inflammatory markers? How was the patient treated apart from ECMO? Did the patient, by any chance, receive warfarin or any other vitamin K analog, given that these induce calcification by inhibiting matrix Gla protein activation? I find the description of the echocardiography result extraordinarily poor. For example, was there what happened to overall left ventricular function? Was there any evidence of constrictive or restrictive physiology? Might the patient have been septic? Was any effort made to quantify and specifically localise calcium? For example, was there any valvular calcification? Why was there no cardiac MRI? What happened to the extent of myocardial calcification in the long term? If the patient recovered despite the calcification, is the calcification important?? Did the patient TRULY recover completely?? Was any study made regarding long-term calcification/fibrosis?
**PEER-REVIEW REPORT**

**Name of journal:** *World Journal of Clinical Cases*

**Manuscript NO:** 71494

**Title:** Extensive myocardial calcification in critically ill patients receiving extracorporeal membrane oxygenation: A case report and literature review

**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer’s code:** 05227810

**Position:** Editorial Board

**Academic degree:** FACC, FESC, MBBS, MD

**Professional title:** Additional Professor

**Reviewer’s Country/Territory:** India

**Author’s Country/Territory:** China

**Manuscript submission date:** 2021-09-11

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-09-26 07:41

**Reviewer performed review:** 2021-10-05 07:11

**Review time:** 8 Days and 23 Hours

<table>
<thead>
<tr>
<th>Scientific quality</th>
<th>[ ] Grade A: Excellent</th>
<th>[ ] Grade B: Very good</th>
<th>[ ] Grade C: Good</th>
<th>[ ] Grade D: Fair</th>
<th>[ ] Grade E: Do not publish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language quality</td>
<td>[ ] Grade A: Priority publishing</td>
<td>[ ] Grade B: Minor language polishing</td>
<td>[ ] Grade C: A great deal of language polishing</td>
<td>[ ] Grade D: Rejection</td>
<td></td>
</tr>
<tr>
<td>Conclusion</td>
<td>[ ] Accept (High priority)</td>
<td>[ ] Accept (General priority)</td>
<td>[ ] Minor revision</td>
<td>[ ] Major revision</td>
<td>[ ] Rejection</td>
</tr>
<tr>
<td>Re-review</td>
<td>[ ] Yes</td>
<td>[ ] No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SPECIFIC COMMENTS TO AUTHORS
The authors have elaborately described an unusual complication of ECMO therapy and selected cases from literature to perform a review. The manuscript describes a case of extensive myocardial calcification in a young male following VA-ECMO therapy. They also describe the literature regarding myocardial calcification following ECMO too. They describe the various plausible mechanisms for the phenomenon. Few comments- 1. The LV systolic and diastolic functions of the index case need to be clearly mentioned both during index visit and follow up. 2. Is there any difference in literature regarding myocardial calcification after VA or VV ECMO...effect of type of ECMO can be added in discussion 3. Few areas need language clarity and I have highlighted 10 comments/corrections in the manuscript word file attached. Please respond to each one of them.