



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

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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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?



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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

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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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.