

Dear editor,

Thank you for your letter and the reviewers' comments on our manuscript (Manuscript NO.: 75793, Case Report). Those comments are very helpful for revising and improving our paper. We have carefully reviewed the comments and have revised the manuscript accordingly with the "tracking changes" feature, changes to the manuscript are shown in red. If there are any other modifications we could make, we would like very much to modify them and we really appreciate your help. Our responses are given in a point-by-point manner below, all page and line numbers refer to the revised manuscript file with tracked changes:

For Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: This is an original manuscript about a rare case of effusive-constrictive pericarditis caused by *Pseudomonas Aeruginosa*. This study highlights the key role of a non-invasive and economic tool (echocardiography) for the diagnosis and follow-up of this condition, but I think it's more important to focus on the rare aetiology of pericarditis, reporting more details about *Pseudomonas Aeruginosa* patient's infection and risk factors. You prepared the manuscript correctly according to the CARE check-list Case report. Did you explore patient's risk factors and conditions predisposing to contract the *Pseudomonas Aeruginosa* infection? Could you add a baseline 2D-TTE image and/or video, before performing pericardiocentesis? Why did not you observe the pericardial thickness at the first TTE? Did you perform a cardiac catheterization? Did you administer medical treatment to the patient before pericardiectomy? There are other essential signs in ruling out constrictive pericarditis on M-Mode, like the posterior motion of the septum during early diastole on inspiration. Could you cite them with corresponding references? I think you should improve grammar and style, especially for the abstract.

Response: Thank you for your valuable comments on this article. Our responses are given in a point-by-point manner below,

1. *P. aeruginosa* is a rare etiological agent in ECP. Infections with *P. aeruginosa* occur mainly in immunocompromised and neutropenic patients and are associated with the presence of indwelling catheters and disruption of mucocutaneous barriers. Prior hospitalization and prior use of antibiotics were the most significant risk factors for acquisition of resistant *P. aeruginosa*¹.

P. aeruginosa cause a polymorphonuclear reaction that may progress to fibrotic thickening of the pericardium, fibrin deposition and non-specific inflammation, leading to constrictive pericarditis and purulent pericardial effusion²(Page7, line233-242).

2. We have added the baseline 2D-TTE image before performing pericardiocentesis. (Figure 1)

3. When reviewing the first TTE images, the pericardial thickness was already existed at the first TTE. Because the enlargement of the bi-atrial can be explained by atrial fibrillation. Moreover, ECP is relatively rare and cannot be easily diagnosed. As one of the most notable characteristics of pericardial constriction, pericardial thickness was ignored because of a lack of comprehensive understanding of ECP echocardiographic features, leading to a misdiagnosis of localized pericardial effusion. (Page8, line277-282)

4. Though the gold standard for the diagnosis of ECP is invasive hemodynamic evaluation using cardiac catheterization, it is not routine to apply this invasive diagnostic method in patients with ECP in our hospital. Cardiac catheterization was performed in patients with congenital heart disease and pulmonary hypertension.

5. Antibiotic treatment and diuretics were used to relieve symptoms before pericardiectomy (Page6, line204-205).

6. Identification of ECP by echocardiography requires a comprehensive study with two-dimensional imaging, M-mode, and Doppler echocardiography. Key features of constrictive pericarditis include respirophasic septal shifting,

a septal “bounce” or “shudder” due to rapid early diastolic filling of the ventricles. M- mode echocardiography depicting ventricular septal shift towards the left ventricle during inspiration and towards the right ventricle during expiration^{3,4}(Page8, line275-277). We have cited references to illustrate this essential signs (Reference 7,11).

7. The grammar and style were improved according to your suggestion. The revised manuscript has been sent to the professional English language editing company to polish the manuscript further.

Reference

- 1 Raman G, Avendano EE, Chan J, Merchant S, Puzniak L. Risk factors for hospitalized patients with resistant or multidrug-resistant *Pseudomonas aeruginosa* infections: a systematic review and meta-analysis. *Antimicrob Resist Infect Control* 2018; 7: 79 [PMID: 29997889 DOI: 10.1186/s13756-018-0370-9]
- 2 Hassan NE, Dbaiho G, Diab K, Musallam S, Haidar R, Obeid M, Bitar F. *Pseudomonas* pericarditis in an immunocompetent newborn: unusual presentation with review of the literature. *J Infect* 2002;44:49-51[PMID: 11972421 DOI: 10.1053/jinf.2001.0894]
- 3 Kalra AG, Sharp AJ, Dinkha L, Gore R. Effusive-Constrictive Pericarditis in a Young Active Duty Male. *Cureus* 2020;12:e9997[PMID: 32983696 DOI: 10.7759/cureus.9997]
- 4 Ohsawa N, Nakaoka Y, Kubokawa SI, Kubo T, Yamasaki N, Kitaoka H, Kawai K, Hamashige N, Doi Y. Subacute effusive-constrictive pericarditis: Echocardiography-guided diagnosis and management. *J Cardiol Cases*. 2017; 16:14-17[PMID: 30279787 DOI: 10.1016/j.jccase.2017.03.007]

For Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (High priority)

Specific Comments to Authors: Whole of the article is nicely written. After going through the manuscript, I felt that title and the content of the manuscript are not coherent. So, I suggest to revise the title.

Response: Thank you for your valuable suggestions to improve the quality of our manuscript. We have revised the title to” *Pseudomonas aeruginosa* related effusive constrictive pericarditis diagnosed with echocardiography: a case report.”

For Science editor:

This manuscript reported a case of ECP caused by *P. aeruginosa* infection followed up using echocardiography. It is more important to this manuscript to focus on rare etiologies of pericarditis, reporting more details on infection and risk factors in patients with *P. aeruginosa*. It is recommended to add a baseline 2D-TTE image and/or video. In addition, citations of rich references are recommended.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

Response: Thanks for your suggestion. The details on infection and risk factors in patients with *P. aeruginosa* has been stated (*P. aeruginosa* is a rare etiological agent in ECP. Infections with *P. aeruginosa* occur mainly in immunocompromised and neutropenic patients and are associated with the presence of indwelling catheters and disruption of mucocutaneous barriers. Prior hospitalization and prior use of antibiotics were the most significant risk factors for acquisition of resistant *P. aeruginosa*. *P. aeruginosa* cause a polymorphonuclear reaction that may progress to fibrotic thickening of the pericardium, fibrin deposition and non-specific inflammation, leading to constrictive pericarditis and purulent pericardial effusion. Page7, line233-242). Baseline 2D-TTE image (Figure 1) and more references have been added as well (Reference 4, 5,9 and 11).

For Company editor-in-chief:

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Clinical Cases, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor. In order to respect and protect the author's

intellectual property rights and prevent others from misappropriating figures without the author's authorization or abusing figures without indicating the source, we will indicate the author's copyright for figures originally generated by the author, and if the author has used a figure published elsewhere or that is copyrighted, the author needs to be authorized by the previous publisher or the copyright holder and/or indicate the reference source and copyrights. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT). Copyright ©The Author(s) 2022.

Response: We have provided the original figure documents according to your suggestion.