

Peer Review File

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Reviewer A

Hou et al evaluate the value of myocardial strain derived from cardiovascular magnetic resonance imaging in patients with cardiac amyloidosis. Although the topic is timely and of clinical relevance, the sample size is small and the methodology/analysis not robust. Several grammatical errors are detected and the language needs major revision. Part of the conclusion is not supported by the results of this study.

Reply:

Comment 1: The sample size is small and the methodology/analysis not robust.

Reply 1: Thank you for this suggestion. Given the low incidence of amyloidosis, the sample size of this study is small, which may lead to insufficient power of the results. Further expansion of the study is necessary to confirm the results of this research.

Comment 2: Several grammatical errors are detected and the language needs major revision.

Reply 2: Thanks for you suggestion. We have tried our best to polish the language in the revised manuscript.

Comment 3: Part of the conclusion is not supported by the results of this study.

Reply 3: We feel sorry for our carelessness. In our resubmitted manuscript, we have revised the discussion section where it differs from the findings (see Page 16, line 411-413; table 3; Page 29, line 580-584). Thanks for your correction.

Reviewer B

The aim of this study was to evaluate myocardial strain derived from cardiac magnetic resonance (CMR) in patients with cardiac amyloidosis. The authors confirmed the presence of amyloidosis by performing biopsies on extracardiac tissues. However, they relied solely on late gadolinium enhancement (LGE) features to diagnose cardiac involvement. It is important to consider that ATTR amyloidosis can exhibit subtle or smoldering LGE signs, which may have affected the accuracy of their diagnosis. Therefore, it would be beneficial for the authors to provide a justification for exclusively employing LGE features and not considering other potential diagnostic markers.

Another point of concern is the authors' decision to define left ventricular hypertrophy (LVH) based on echocardiographic measurements rather than CMR wall thickness assessment. CMR is known for its superior accuracy in evaluating myocardial structure, and therefore, it would be advantageous to use CMR measurements to define LVH in order to ensure greater precision and reliability.

In Figure 4, the authors need to provide a clearer and more detailed description. It is essential to include comprehensive captions or labels that clearly explain the data presented in the figure.

The authors should also address the prognostic role of longitudinal strain in the discussion section, as it has been shown to be a significant predictor of outcomes in patients with cardiac amyloidosis (10.20517/2574-1209.2021.86).

Furthermore, it could be beneficial for the authors to include a citation to 10.3390/jcm12103481, which provides a comprehensive description of the diagnostic features of cardiac amyloidosis at CMR.

Reply:

Comment 1: Authors relied solely on late gadolinium enhancement (LGE) features to diagnose cardiac involvement. It would be advantageous to use CMR measurements to define LVH in order to ensure greater precision and reliability.

Reply 1: Current methods for diagnosing cardiac amyloidosis include LGE, T1 mapping, ECV, etc. But some methods have limited performance in many hospitals. Therefore, in this study, only LGE positivity was used as the diagnostic basis for the presence of myocardial involvement, which affected the accuracy of the diagnosis to some extent. Therefore, we also added limitations.

Comment 2: Defined left ventricular hypertrophy (LVH) was measured by echocardiography rather than by the more accurate CMR wall thickness assessment.

Reply 2: LVH determined by CMR is more accurate and precise than M-mode echocardiography, but because CMR and echocardiographic LVH measurements show a high degree of correlation and because echocardiography is the preferred initial imaging test for suspected cardiac amyloidosis facilitates the initial identification and accurate grouping of LVH. Therefore, echocardiography was chosen as the diagnostic modality for LVH in this study. However, echocardiography may also introduce a degree of bias.

Comment 3: In Figure 4, the authors need to provide a clearer and more detailed description.

Reply 3: We have modified our text as advised. For the convenience of the reader, we have included a more detailed description of this below the figure (see page 23, line 481-489).

Comment 4: The authors should also address the prognostic role of longitudinal strain in the discussion section.

Reply 4: We sincerely appreciate the valuable comments. We have checked the literature carefully and added more references on the prognostic role of longitudinal strain in the revised manuscript (see page 32, line 695-697).

Comment 5: It could be beneficial for the authors to include a citation to 10.3390/jcm12103481, which provides a comprehensive description of the diagnostic features of cardiac amyloidosis at CMR.

Reply 5: As suggested by reviewer, we have added more references to support this idea (see page 6 line 129-133).