Reviewer’s report

Title: Comparison of short axis and long axis acquisitions of T1 and extracellular volume mapping using MOLLI and SASHA in patients with myocardial infarction and healthy volunteers

Version: 0 Date: 17 Oct 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are minor issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

No - there are minor issues

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are minor issues

OVERALL MANUSCRIPT POTENTIAL - Could an appropriately REVISED version of this work represent a technically sound contribution?

Probably - with minor revisions

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: The manuscript describes the results of a cross sectional study investigating T1 and ECV quantified from long-axis acquisitions compared to short-axis acquisitions using MOdified Look-Locker Inversion recovery (MOLLI) and the Saturation recovery single-shot acquisition (SASHA) in healthy volunteers and patients with myocardial infarction. It has been concluded that long axis measurements of myocardial T1 and ECV by
these methods result in good agreement with the corresponding short axis measurements allowing for fast and reliable myocardial tissue characterization in cases where shortening of the overall imaging acquisition is required.

REQUESTED REVISIONS:
- Please be more specific about reporting the p values. P > 0.05 could be 0.06 or 0.9, two numbers which are totally different with two different significance for the readers. P < 0.05 also could be 0.04 or 0.0001, two numbers which are totally different with two different significance for the readers.

- More information regarding the placement of region of interest (ROI) on myocardial images is needed. Who drew the ROIs?

- I believe one of the most important confounding factors in this study is the significant age difference between the cases and controls. The patients with myocardial infarction are significantly older, which may affect their CMR and ECV. This should be discussed in the section of the study limitations. Also, they have to try to correct this confounding factor. I am not sure but other factors, such as patient's heart rate at the time of image acquisition or body size can also be considered as confounding factors.

- As it stands, the conclusion is quite brief and would benefit from further elaboration on the potential for future research based on your results as well the overall implications of your results. I suggest adding a statement that mentions the overarching clinical implications of your findings and explains why your findings are relevant/important and how they can shape future research.

- Please ensure that all abbreviations used in tables and figures are defined in full, as figure/table footnote. Each figure/table should be independently descriptive of all its content.

- Was the patient renal function one of your inclusion/exclusion criteria?

ADDITIONAL REQUESTS/SUGGESTIONS:
- Abbreviations and acronyms (such as CMR and ECV) are often defined the first time they are used within the abstract main text and then used throughout the remainder of the manuscript. Please consider adhering to this convention. This is specially important regarding your abstract, as the abstract readers may not have access to the full text.

- The results section of the abstract is does not provide an adequate description of the main outcomes of the research. Please provide more objective data for your abstract readers.

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

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