Reviewer's report

Title: Heart Disease and Left Ventricular Rotation - A Systematic Review and Quantitative Summary

Version: 1 Date: 2 March 2012

Reviewer: Veronica Jamnik

Reviewer's report:

Minor Essential revisions

General Comments

The topic addressed in this systematic review is very important as this line of research is attracting more attention. It consolidates the literature and provides a reference point from which a number of critical issues can be addressed (eg standardization of: measurement procedures; acquisition, analyses and reporting of data). I support its publication. This has both clinical and non-clinical implications (e.g. middle age and young old adults taking up marathon running, effects of lifelong endurance training, etc.)

As whole, I have no substantive changes for the authors; however, there are a few minor changes that should be made.

Specific Comments:

“Gender” should be changed to “sex” throughout the manuscript

Throughout the document, under each condition be consistent in how the quality of the studies are addressed e.g. Down and Black scores ranged from 15-19 (moderate methodological quality)

Page 3

First paragraph, line 11 – the sentence beginning with “The use of MRI for evaluating rotation of the LV is the considered…. Remove “the”

Second Paragraph, last line… What is meant by “depends disproportionately on fibers…” - the word disproportionately needs to be clarified

Page 4

Line 9 – change “male gender” to “being male,”

Page 10

From the top of the page, line 7 – “three showing no difference, we feel the discrepancy can be best explained by work by Bansal et al, which showed region
of infarct can influence greatly …. Should be changed to “three showing no difference, we feel the discrepancy can be best explained by Bansal et al, who showed that the region of infarct has a significant impact on LV….”

Last line – remove “perhaps”

Page 11

First line - “markers of twist and rotation are not suitable…” should be changed to “markers of twist and rotation may not be suitable..”

Page 12

Conclusions – the sentence beginning with “It is likely that differences in methodological techniques as well as subtle differences between study populations …” be changed to “It is likely that differences in methodological techniques study populations …”

Page 13

Last sentence – “Lastly, it was consistently reported that large proportions of those with dilated…” should be changed to “Lastly, it was consistently reported that the majority of persons with dilated…”

Page 14

Fourth paragraph, first sentence what is meant by “grouped sample” – could it not just read “ in a sample of non-compaction participants”

Last sentence – Replace “Roughly” with “Approximately”.

Page 15

Systolic Heart failure, first paragraph, second last line - “(however did report an EF of 26% in their clinical population)” should be changed to “while one article did not report specific criteria other than an EF of 26% in their clinical population” – DO you need the brackets?

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'