Reviewer's report

Title: A moderate 500-m treadmill walk for estimating peak oxygen uptake in men with NYHA class I-II heart failure and mid-range ventricular dysfunction

Version: 1 Date: 07 Nov 2017

Reviewer: Oyvind Ellingsen

Reviewer's report:
The specific aim of the study was to examine the validity of a 500-m moderate treadmill-walking test for estimating VO2peak in men with HFrEF, exercising at self-paced moderate intensity (Borg 11-13). The potential usefulness of the procedure would be to replace a standard cardiopulmonary exercise test with a simpler and more available procedure for diagnostic, prognostic and monitoring purposes.

GENERAL
1. The study demonstrates excellent validity of the procedure in a small-size (n=39) sample of a well-defined subset of male HFrEF patients aged 35-80, NYHA class I-II. Since there already exist several similar procedures and the novelty may appear incremental, it could perhaps be stated even more specifically what was the expected application of the procedure (Abstract, Introduction), what is the novelty of their findings (Abstract, Discussion/Conclusion), what are the limitations (Discussion/Limitations), what is the potential clinical application (Introduction and Discussion), and what should be the future direction of developing this type of methodology (Discussion).

SPECIFIC
2. Exactly what was the LVEF criterion for inclusion? Upper (and lower?) limit(s) of LVEF should be given (Abstract, Methods).

3. The phrase "old men" (Abstract, most sections) does not resonate well with the given range of ages for inclusion (35-80).
4. It would be helpful to include the definition of CPX and RPE when first occurring in the text (Methods).

5. In Table 1-2, there seems to be space enough to spell out some of the abbreviations (may be all?), thus facilitating the flow of reading.

6. The relatively small number of patients (N=39) should be mentioned in limitations.

7. What is the precision of the procedure studied? Is there any coefficient of test-retest variation? How well suited is the method to assess small to moderate changes within each patient? This should perhaps be discussed in the perspective of using the estimates for monitoring progress and decline in individual patients (Limitations, Future directions).

8. The final sentence of the "Study limitations" should be expanded with some more suggestions of future direction of research, e.g., with more details of how "external validation of our findings" could be performed.

9. It would be more informative if the "Figure title" could be expanded with some more explanation of what the different lines represent and a brief interpretation of what the data shows. Is there any connection with the analyses of Linear correlation, SEE, Bland-Altman, Passing and Bablok, Normal probability plot of the residuals? Should the regression equations be included?

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

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

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.
I am able to assess the statistics

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