



SDI Review Form 1.6

Journal Name:	<u>Cardiology and Angiology: An International Journal</u>
Manuscript Number:	2014_CA_8936
Title of the Manuscript:	Assessment of a cardiac rehabilitation program based on the Borg RPE Scale and six-minute walk test
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	In this manuscript, the authors have evaluated the effects of a six week exercise training program based on the Borg RPE scale in patients with coronary artery disease. The only endpoint of the study was change in 6MWT distance. I have some concerns about this study METHODS <i>Safety concern:</i> it is related to the lack of ergometric test before starting rehabilitation program. In my opinion it should be performed in order to rule out ischemia during exercise in patients with already diagnosed coronary artery disease. Authors should explain this point.	All cardiac rehabilitation was conducted as per American Thoracic Society guidelines and Australian Guidelines under supervision of the physician and exercise physiologist. Any at risk patients of exercise induced ischemia were not included in the current study. We added this sentence to the methods



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	According to data reported in this manuscript, the total amount of exercise performed by the patients is very low: they performed only 1 supervised session/week. Moreover about 1/3 of them did not perform exercise (6 no-walkers) at home. I doubt that this level of exercise could induce significant cardiovascular adaptation. Authors should discuss this point. <i>Main concerns:</i> The study sample is very small. A control group of CAD subjects performing a traditionally prescribed exercise program is needed	This point is covered in the discussion as we also observed this. However as we stated in the discussion, participants improved on the 6MWT and therefore had a positive outcome of cardiac rehabilitation. We also highlight that patients who did not participate in the home program had less improvement suggesting that the Borg RPE scale is sufficient to set exercise targets, which lead to improvements in 6MWT We do acknowledge the study sample is small. However in terms of our findings with the 6MWT it follows that of a larger study and therefore the results obtained in this study are meaningful. There are a number of studies in cardiac rehabilitation with approximately equal numbers to ours and deemed meaningful. We are certainly endeavouring to increase sample size for subsequent studies but for this study we have shown the effectiveness of the Borg RPE scale for setting exercise targets, which lead to positive outcome when measured by 6MWT. This is especially important in rural CR. See this recent article for instance (Maiya, A., Shad, B.,
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	Mirbolouk, F., Haddadzadeh, M. & Padmakumar, R. (2011) Effect of exercise-based cardiac rehabilitation on ejection fraction in coronary artery disease patients: A randomized controlled trial. <i>Heart Views</i> 12(2): 51-57) RESULTS Drug therapy of patients should be reported. The improvement obtained on 6MWT distance are very small and learning effects cannot be ruled out CONCLUSIONS Conclusions seem to go beyond what is obtained in the result session	The paper aimed to assess whether the Borg RPE scale can be used for exercise prescription rather than a graded exercise test as the Borg RPE is independent of medication use whereas the measure of VO2max, for instance, is not. The validity was checked with an accepted measure of cardiac rehabilitation outcome, being the 6MWT. However we have now added a table showing medication use in this group. Learning effects may be present but are unlikely over a 6 weeks period, where patients walked 6 minutes at the beginning of the CR We have rewritten the conclusion to be reflective of our results. Cardiac rehabilitation effectiveness was measured by the 6MWT, which has been validated as an effective assessment tool in cardiac rehabilitation. It is exactly the issue that the perception of effort
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	Concerns about the training intensity reached by the patients remains: without a preliminary CPX and ECG-monitoring during the exercise sessions the correlations between the individual perception of effort (Borg scale) and % of heart rate remain theoretical mostly in subjects taking drugs that affects heart rate. Authors should discuss about this point.	to prescribe appropriate exercise levels has shown an improvement following cardiac rehabilitation similar to current CPX and ECG monitoring, which is the important finding. We have discussed this in more detail.
<u>Minor</u> REVISION comments	Authors stated that 15 subjects completed the study and were fully evaluated. But they also stated (line 180) that data of only 13 subjects were reported in table 3. Authors should clarify this point Authors did not report data on resting heart rate and blood pressure before and after the training program. However these parameters could be useful markers of cardiovascular adaptation	Thank you – typo was fixed We agree with the reviewer that these parameters could be useful. However our aim was to show that using the Borg RPE scale led to improvement over a 6 weeks CR program by measuring the pre and post 6MWT. We did not investigate response to exercise pre –post exercise but rather the global outcome following a 6 weeks program
<u>Optional/General</u> comments		