Reviewer's report

Title: Influence of the incremental step size in work rate on exercise response and gas exchange in patients with pulmonary hypertension: a prospective controlled study

Version: 2 Date: 23 November 2007

Reviewer: Thierry Le Tourneau

Reviewer's report:

General

In their original prospective study authors report the influence of exercise protocol type on objective assessment of functional capacity using gas exchange measurement in patients with pulmonary hypertension. The main result of this study is that the type of exercise protocol does not influence the results of maximal oxygen uptake when exercise is maximal in this setting. The study is well performed, the rationale for protocol is logical and clear, but there are some confusion between objectives, summary and results. Hence, substantial improvements have to be performed.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. All but one patient had pulmonary hypertension from group I of the WHO classification. Therefore, the patient with post-embolic pulmonary hypertension has to be removed. Cause of pulmonary hypertension should be provided and shown in a baseline characteristics table with others relevant data.

2. The second major issue regards comparisons between Jones protocol and either NYHA II or III protocols. First this comparison does not match with the goal of the study which was a comparison for the overall patient population between Jones protocol and NYHA protocol adapted to clinical classification, performed in a randomized order. Second the number of patients is limited in each subgroup, and do not allow the use of a paired student t-test. Therefore authors should delete data in the table regarding subgroups comparisons (Jones with NYHA II or III), and figures should match the main results of the study; this will substantially improve the manuscript. Subgroups analysis may eventually be provided with adapted statistical analyses as a complement of the main results.

3. I also strongly suggest providing a table with baseline and maximal exercise data as HR, BP, oxygen saturation, exercise-limiting symptoms... for at least the overall patient population, and maybe for each protocol.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Echocardiographic data at rest, beyond pulmonary pressure, should be provided if available.

2. How many patients were under oxygen at home, and did patients exercise under oxygen delivery or not?

Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

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