Reviewer’s report

Title: Does Pulmonary Rehabilitation address Cardiovascular Risk Factors in Patients with COPD?

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Reviewer: Martijn A Spruit

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Gale et al. describe the effects of pulmonary rehabilitation on cardiovascular risk factors in patients with COPD. Indeed, patients with COPD have an increased aortic PWV at baseline compared to healthy elderly subjects. In addition, aortic PWV decrease slightly but significant following pulmonary rehabilitation.

The paper reads well and provides additional confirmation that pulmonary rehabilitation results in beneficial effects in (currently) unconventional outcomes, like cardiovascular risk factors.

I do have some comments:

1. Please explain the poor ICC for the augmentation index is rather low. Can you still use this outcome to assess the effects of pulmonary rehabilitation?
2. Please provide p-value for proportion of hypertensive patients (41%) vs. hypertensive healthy subjects (25%).
3. Do the correlations between aortic PWV and IL-6 remain in only the group of COPD patients? If not, I suggest to remove this from the manuscript.
4. Where were healthy subjects recruited?
5. The authors provide nicely a power calculation in the statistics paragraph based on the 2007 Sabit paper. Nevertheless, it remains unclear why the aortic PWV of the COPD patients in the Sabit paper had a aortic PWV of 11.4 m/s while this was clearly lower in the current manuscript (9.8 m/s). The 'suitability for pulmonary rehabilitation' is too vague. Could there be a selection bias? Other outcome assessors/technicians? Etc.
6. Please explain the low proportion of male patients.
7. Please provide more details on the pulmonary rehabilitation program.
8. Please provide mean (SD) improvement in ISWT and SGRQ.
9. The authors expected a 15% drop in aortic PWV, while the actual decline is about 5%. Please explain this discrepancy.
10. Please add page numbers.
11. Please provide a graph with the individual data points before and after pulmonary rehabilitation for aortic PWV and systolic BP for the patients with COPD who competed the pulmonary rehabilitation.