Reviewer’s report
Title: Characteristics of exercise capacity in female systemic lupus erythematosus associated pulmonary arterial hypertension patients

Version: 2 Date: 25 Oct 2017

Reviewer: Takahiro Okumura

Reviewer's report:
In the manuscript entitled "Characteristics of exercise capacity in female Systolic lupus erythematosus associated pulmonary arterial hypertension patients", the authors reported CPET data in SLE PAH patients compared to IPAH patients and control subjects. In addition, the correlations between key CPET parameters and PVR were revealed. These findings are scientifically sound. However, there are some critical concerns in this manuscript.

#1 The description in this manuscript does not conform to the manuscript submission rules, including the use of abbreviations. In addition, this lacks clarity and sharpness, and several sections are poorly organized. This manuscript would benefit tremendously from language editing by either a native English speaker or a professional editor. There are a number of typographical errors throughout the manuscript. It is a hard-to-read article for the readers.

#2 It is somewhat unclear as to what purpose the authors examined the CPET data in SLE PAH patients compared to IPAH patients. Therefore, the clinical implications are not clear in this manuscript.

#3 The authors described "Submaximal parameters of oxygen uptake were equally useful in SLE PAH" in the Abstract. Explanation of how it is useful is inadequate in this manuscript.

#4 In the CPET protocol, the increasing work load is arbitrarily decided by the examiner; 10-25 W/min. Is not this bias affecting the results?
#5 Valid digits of the same exam data should be aligned. For example, peak work load in SLE PAH was 68.9±22.9, whereas peak work load in IPAH was 76.8±23.1 (Table 1)

#6 (Page 6, Line 6) The authors described as "according to the following equation: VO2 a lgVE b =+x". It does not form an equation.

#7 The CO data evaluated by thermodilution method is inaccurate in case with advanced tricuspid valve insufficiency or PAH. The authors should use Fick method for evaluating CO.

#8 Usually, the initials of English words in sentences are lowercase letters. For example, Peak VO2 => peak VO2

#9 "pulmonary capillary wedge pressure" and "pulmonary artery wedge pressure" are mixed in this manuscript.

#10 The first word should be spelled out such as PFT (Page7, Lines 3). On the other hand, you don't need to spell out the second or subsequent words.

#11 The authors described "Both SLE PAH and IPAH patients failed to reach predicted peak heart rates." There is no basis data. The authors should show the information about target heart rate.

#12 The authors described "The NTproBNP levels were higher in the SLE PAH group despite …" (Page 9, Lines 3). However, NTproBNP level was comparable between 2 groups in Table 2 (p=0.9, 1027±1669 vs 979±1447).

#13 Collagen disease is associated with interstitial pneumonia at a high rate. The authors should show the data on pulmonary interstitial fibrosis such as KL-6, SP-D, or SP-A.

**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.

No
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

**Quality of written English**

Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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