Reviewer's report

Title: Oxidative stress mediated arterial dysfunction in patients with obstructive sleep apnoea. Effect of continuous positive airway pressure treatment

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Reviewer: Seockhoon Chung

Reviewer's report:

Major Compulsory Revisions

This article is a well-written and well-designed study. However, there are several issues which should be discussed.

1. Unattended NPSG (home PSG) and home nCPAP titration by using an automated pressure setting device are should be considered as a major limitation of this study. The severity of OSAS in this study depends on the result of home PSG, however, the reliability of home PSG is usually thought to be low. And CPAP titration should be done by using the attended NPSG rather that home auto-PAP device.

2. Just 10 patients were compliant to CPAP treatment over a 6 months. Small number of CPAP patients also should be presented as a limitation of this study.

3. CPAP-related data must be added.
   1) How many patients were done the CPAP titration?
   2) How many patients used nCPAP after nCPAP titration?
   3) The authors presented "adherence to CPAP was defined as > 4hours". However, the author should define the compliance rate, and the compliance rate to CPAP should be presented.

EX: CPAP > 4 hours in all days? nCPAP > 4 hours just in nCPAP using day?

Others

1) Title of this article should be "one sentence"
2) Abstract - Background

Several studies suggest an increase of oxidative stress and a reduction of endothelial dysfunction in OSAS --> "reduction of endothelial dysfunction" is it right?

3) The aim of the authors was to assess the association of OSAS with endothelial dysfunction and oxidative stress in a "large sample" of patients... However, the number of enrolled subjects was small.

Level of interest: An article of importance in its field
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:

No to all