**Reviewer's report**

**Title:** Lasting effects of short term non-invasive ventilation in the PACU on postoperative lung function in obese adults

**Version:** 2  **Date:** 12 February 2011

**Reviewer:** Gerald Zavorsky

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Lasting effects of short term non-invasive ventilation in the PACU on postoperative lung function in obese adults. Zoremba et al. first revision submitted Feb. 2011 to BMC Anesthesiology

I have re-read the revised manuscript. I am pleased that the authors have attempted to amend the manuscript according to my concerns, but there are still some issues.

Major Compulsory revisions

1. A native English speaker needs to re-write the manuscript. It does not flow well and spelling mistakes are still present

   Intro, 5th line down, there should be a comma after THUS

   Intro, 15th line down, the sentence that begins with “As a result of this” makes no sense.

   Intro, 16th line down, the sentence that begins with “An additionally” also makes no sense.

   There are several more grammatical errors of which I cannot / do not have time to correct. This manuscript needs a complete re-write by a native English speaker.

2. The fact that pre-operative blood gases were not obtained is still a significant issue. There are published studies which measure arterial blood gases in obese subjects both before and after surgery1. Indeed, there are at least 14 studies totaling 288 subjects that have measured arterial blood gases pre and post surgical weight loss in obese subjects (See Table 3 in the following review1). Thus their ethics committee needs to be educated that measuring arterial blood gases before and after surgery has been done many times before without any harm to patients.

3. The improvements (the change) in PaO2, %SaO2 (via pulse oximetry), PaCO2, and the AaDO2 should be written in the text along with the 95% CI of the change. For example, you can state that the change between NIV and control for PaO2 was 7 ± 10 mmHg (95% CI, 3 to 10 mmHg, p < 0.05) (just as an example). You can round off the arterial blood gases to the nearest whole number. The
decimals are distracting and meaningless.

4. There is no evidence that small improvements in arterial blood gases actually improves surgical outcome. Specifically, do the authors know if there are any clinically meaningful improvements in surgical outcome when PaO2 is larger by 7 mmHg compared to control? Are there any clinically meaningful differences between groups when AaDO2 is decreased from 33 to 27 mmHg compared to control?

5. The pulse oximetry saturation as a percentage of pre-operative value is wrong. You can’t take a percentage of a percentage. Use the absolute pulse oximetry values in the two groups and not the percentage of the difference compared to baseline in Figure 1 D.

6. The title of the manuscript should be changed to read “Non-invasive ventilation post-surgery improves arterial blood-gases in obese subjects compared to supplemental oxygen delivery.” You see, the term “lung function” is so vague. Arterial blood gases were improved and thus should be stated in the title. As well, the term “lung function” should be removed throughout the manuscript and the authors should be specific as to what improved (PaO2, AaDO2 etc…). Furthermore, the term “morbidly obese” are for those whose BMI are # 40 kg/m2, however mean BMI of both groups were obese category II and thus NOT morbidly obese. Remover “Morbidly in the title and throughout the manuscript.

Minor essential revisions

1. The control group that received the supplemental oxygen with a Venturi mask was stated to have an oxygen flow of 6 L-1? Do the authors mean 6 L/min? Please correctly define the units.

2. Statistical analysis section, please replace “proove” with “demonstrate a…”

3. Results section, 7th line below, replace “statistic” with “statistical”

4. Table 2, the units of measurement should be placed in each column and NOT beside the actual values. PEF and MEF25-75 are in L/s, while FEV1 and FVC are in liters.

5. The units of measurement in Table 1 are missing in some areas. Please incorporate the units in column one beside the title of the parameter and NOT beside the values.

Reference


Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare i have no competing interests.