Reviewer’s report

Title: PROtective Ventilation with a low versus high Inspiratory Oxygen fraction (PROVIO) and its effects on postoperative pulmonary complications: protocol for a randomized controlled trial

Version: 1 Date: 28 Jun 2019

Reviewer: Sabrine N.T. Hemmes

Reviewer's report:

I thank the authors for their clear replies to my questions and their adjustments to the manuscript. In my opinion the manuscript is almost ready for acceptance, if the belowmentioned issues are managed.

>> The readability of the manuscript is much improved, but still needs some further improvement regarding English language; in specific the Methods chapter

p.5, L42-54: 'Setting FiO2 intraoperatively is a significant task of anesthetists, but has not based on evidence-based guidelines. Obtaining comprehensive knowledge about hyperoxia caused by high FiO2 has been stressed by clinicians over the past few decades. Potentially preventable hyperoxia and substantial oxygen exposure are common in clinical practice to maintain satisfactory oxygenation [17]. However, there's no significant difference in pulse oximetry, oxygenation index and functional residual capacity for several time-points with 30% or 80% FiO2 intraoperatively [18]'"  
>> I assume that the authors suggest hyperoxia to be deleterious for the lung, but it is not clear in this paragraph. The authors mention it further down, but I would advise to make this clear in this paragraph too, as it is the main pathologic issue which their study examines.

>> I would also advise the authors to add a small paragraph on background of hyperoxia induced lung injury. What is the mechanism?

p.6, L1: The recent systematic review revealed'
>> Recent systematic reviews revealed

p.8, L 9-10: 'The ARISCAT score will help to analyze the effect of FiO2 to intermediate high risk patients who get a score of more than 26.'  
>> So, only patients with an ARISCAT score > 26 will be included? The Methods are still not clear here.

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