Reviewer’s report

Title: Cluster randomised comparison of the effectiveness of 100% oxygen versus titrated oxygen in patients with a sustained return of spontaneous circulation following out of hospital cardiac arrest: a feasibility study. PROXY: Post ROSC OXYgenation Study

Version: 1 Date: 23 Oct 2018

Reviewer: Markus B Skrifvars

Reviewer's report:

I have read with interest this revised version. The paper has been changed, and improved to some extent. However, I am still very much concerned about the conclusion given the results. My impression are that this study shows:

1. It is appears very difficult to titrate oxygenation using peripheral oxygen saturation in the pre-hospital setting. If one combines the "missing data" and "unable to measure" in Table on ends up with almost 40% of the patients. I think would be a huge problem for a future trial.

2. I am surprised with the ABG results on admission to the hospital, there appear to be very little difference between the 100% group and the titrated oxygen group. The patients on 100% appear to have a very severe oxygenation problem with a P/F ratio less than 100. This is also a worry and will make it very difficult to achieve separation between groups.

3. I am puzzled by the comment that the authors wish to cite a small trial suggesting harm from hyperoxia, and that they do not want to cite a much larger trial suggesting that there is no harm.

4. A number of patients in the titrated arm are according to Table 5 being treated with mechanical ventilation with an FiO2 of 100%. This will dilute any difference between the interventions.

All in all this pilot study provides some interesting data. However, I would not consider it feasible to do a large randomized controlled trial based on these results, but rather the contrary. The way oxygen is delivered and monitored would need to completely changed.
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?
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No

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Not relevant to this manuscript

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