Reviewer's report

Title: Predictors of neurologic outcome after successful extracorporeal cardiopulmonary resuscitation

Version: 5  Date: 26 November 2014

Reviewer: Hermann Wrigge

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MAJOR COMPULSORY REVISIONS
1. Abstract, Conclusion and Discussion, page 11, lines 17-18: association of less good neurological outcome with lower hemoglobin levels does not allow in turn to argue that a higher hemoglobin level induced by transfusion would be neuro-protective. The effects of transfusion were not studied and a retrospective study is hypothesis generating - at best. Transfusions are known to have side effects and tolerating lower transfusion triggers resulting in comparable or even better outcome as shown recently in an increasing number of studies in other settings, which is somewhat conflicting with your findings. Please discuss.

2. The number of patients that received hypothermia is low, despite the fact that body temperature can be easily controlled during ECMO. Why? This limitation was mentioned but the reason not explained.

MINOR ESSENTIAL REVISIONS
1. page 5, lines 20-21 "This study was performed retrospectively..." contains duplicate information and can be omitted.

2. Abstract: number of non-included patients unclear: how many dies and how many were lost due to missing outcome?

3. Page 12, line 2: “affected by” better: “associated with”, because poor neurologic outcome is not caused by lactic acid but by low cardiac output. Thus, lactic acid and neurologic outcome are not causally linked.

DISCRETIONARY REVISIONS
1. Abstract: Statistical method for identifying risk factors is not mentioned in the methods but in the results. Consider changing.

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:
I declare that I have no competing interests