Reviewer's report

Title: Cooling after successful resuscitation in cardiac surgery patients

Version: 1 Date: 1 March 2013

Reviewer: Justin Lundbye

Reviewer's report:

Dr. Vollroth and colleagues report on a very important concept in patients who have suffered cardiac arrest after heart surgery. There is not a lot of data on this topic and population. In view of this, I am encouraged by the attempt by the authors to summarize their institutional experience. Here are my comments:

I have categorized the level of revision needed by letters A, B, C.

(A): major compulsory revision

(B): minor essential revisions

(C): discretionary provisions

1. There’s no discussion of IRB/human ethics standards in this paper. The author should make mention of this. (A)

2. Reference 3, does not correspond to the topic that’s being referenced. (B)

3. Under background, please change “based on two randomized trials and one meta-analysis, survivors of OHR were treated…” to “based on two randomized trials and one meta-analysis, survivors of OHR have been treated…” (C)

4. Please consider changing the language from: “this paper stimulated many clinicians in cardiac surgery centers…” to “this paper encouraged many clinicians in cardiac surgery centers…” (C)

5. Please clarify the purpose of this analysis: (B)

   a. was the purpose to report your first experience in a non-selected IHR population where hypothermia was induced independent of initial rhythm or

   b. was the purpose to report your first experience in post CABG/valve surgery in hospital resuscitated population where hypothermia was induced independent of initial read them?

6. In table 1 please specify what the second column represents; for example: \%(n) (B)

7. The author mentions exclusion criteria as any patient less or equal to the age of 80 years. I think this is reversed. (A)

8. In the last paragraph on page 5 cool guard 3000 as referenced however the manufacturer now is Zoll. (B)

9. On page 6, the third line, please consider changing the wording to: “our goal was to reach the target temperature…” (C)
10. On page 6, the second paragraph, the author describes sedation and references neuromuscular blockade. Please consider changing: “if necessary they received relaxation through intravenous Pancuronium” to “when clinically appropriate, the patients received neuromuscular blocker intravenously using pancuronium” (C)

11. under statistical analysis, please change from und to and (B)

12. The author reports that therapeutic hypothermia and resuscitated cardiac surgery patients is associated with improved neurologic outcome independently from initial heart rhythm. I am unclear how this conclusion can be drawn when there is no control in this report. One of the major weaknesses in this study is that there’s no comparison to a control group. In view of this, the author can only indicate this as a observational study/report.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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 speak for Zoll medical however I do not believe it represents a conflict as this report does not speculate the cooling approach but rather the patient population.

I hold no stocks were shares in any conflicting organization.

I’m applying for no patents relating to the content of the manuscript and I have received no reimbursement, fees, funding or salary from an organization that holds or has applied for a patent relating to the content of the manuscript.

I have no other financial competing interest.