Reviewer's report

Title: Cardiac condition during cooling and rewarming periods of therapeutic hypothermia after cardiopulmonary resuscitation

Version: 2
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Reviewer: Annop Piriyapatsom

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In this interesting manuscript, the authors investigated if there was any change in cardiac function during the cooling and the rewarming period following therapeutic hypothermia in patients with ROSC after CPR or not. By measuring cardiac function using the transpulmonary thermodilution, they found that there was a significant increased CO/CI during the rewarming period comparing with that during the cooling period at the same body temperatures. I have some comments below.

Major Compulsory Revisions

1) Regarding the exclusion criteria, it seemed that there was some selection bias. The authors should provide the reasons why those patients with severe cardiogenic shock, severe heart disease or pulmonary thromboembolism were excluded from this study?

2) From the result in the Table 12, there were significant increased CO and CI and significant decreased SVRI but no significant change in GEDVI (except at the body temperature of 36 degree) or HR during the rewarming period compared with the cooling period. This might imply that there was an increased SV during the rewarming period resulted from either increased contractility or decreased afterload or both (assumed that there was no change in preload). Could this be distinguish from this study? Was there any difference in other intervention such as doses of inotropes and vasopressors during 2 periods?

Minor Essential Revisions

1) In page 6, line 7, correction (p<0.05)

2) In page 9, line 1, “When cooling begins, vessels expand, CVP decreases…” Was this written correctly?

Discretionary Revisions

1) Other data such as principle diagnosis or severity of the acute illness should be included in the demographic data in Table 1.

2) In the result section, there should be less than 12 tables. If the aim of the study was to compare the cardiac function during the cooling and the rewarming periods at the same body temperatures, the authors should focus on the result of the Table 12.
Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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.