Reviewer's report

Title: Six-years survival and predictors of mortality after CABG using cold vs. warm blood cardioplegia in elective and emergent settings

Version: 1
Date: 30 August 2015

Reviewer: Hiroshi Yamamoto

Reviewer's report:

In the present study comparing the effectiveness of intermittent cold blood cardioplegia (ICC) with that of intermittent warm blood cardioplegia (IWC), the authors demonstrated using data from 695 CABG patients (176 and 506 patients receiving ICC and IWC, respectively) that IWC has effective myocardia protection, regardless the urgency of the operation, in terms of 30-day mortality and perioperative myocardia protection after surgery.

1 Major compulsory revision: The authors should describe the number of operators and how do they decided which cardioplegia (ICC or IWC) was chosen before surgery, because of avoiding a patient-selection bias. Are there any criteria determining the type of cardiopegia?

2 Major compulsory revision: The authors should describe the presence or absence of topical cooling in the ICC group, and they should specify the temperature and dose of “hot shot” (terminal warm cardioplegia).

3 Major compulsory revision: The authors should describe the composition of crystalloid Buckberg solution in the method section. I think this is very important to understand the influence of ionic concentration difference between the ICC and IWC groups on the results.

4 Major compulsory revision: The authors should specify the lowest body (e.g., rectal) temperature in CPB in both cardioplegia groups. Was there a difference in CPB blood or body temperature between the two groups?

5 Major compulsory revision: As shown in Table 3, in the emergent CABG cases, the 30-day mortality was 9 patients (5.1%) and 21 patients (4.2%) in the ICC and IWC groups, respectively, and in the elective CABG cases, it was 0 patients (0%) and 10 patients (2.0%) in the ICC and IWC groups, respectively. The authors should describe the cause of deaths of those 40 patients, for example, heart failure (low output syndrome), cerebrovascular events or other organ failures.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the
statistics.

Declaration of competing interests:

I declare that I have no competing interests.