

## **Peer review file**

**Article information:** <http://dx.doi.org/10.21037/jtd-21-568>

### **Reviewer A**

Comment 1: line 105: "our primary outcome was..." instead of "...were"

Reply 1: We have replaced “outcomes were” with “outcome was” as advised (see Page 6, line 105).

Changes in the text: Page 6, line 105

Comment 2: line 105: line 248: "Ueki et al. found that..." instead of "...founded"

Reply 1: We have replaced “founded” with “found” as advised (see Page 14, line 254).

Changes in the text: Page 14, line 254

### **Reviewer B**

Comment 1: You need to clearly define all your primary and secondary outcomes in a separate section so the reader can understand what are you looking at.

Reply 1: We think this suggestion is very important and valuable. We have clarified all the contents of the primary and secondary outcomes in a separate paragraph, so that readers can understand the content we want to explain more clearly and intuitively (see Page 6-7, line 106-112).

Changes in the text: Page 6-7, line 106-112

Comment 2: Did you consider doing subgroup analysis? this is important to compare RCT vs Observational studies.

Reply 2: As you suggested, subgroup analysis can help find the source of heterogeneity and get more accurate and objective results. We have tried to divide RCT research and observational research into different subgroups to analyze and distinguish the differences between the two types of research results. However, the number of RCT

studies and sample size of the data is small, which will increase the difficulty and uncertainty of data analysis. Then we read a large number of such research literatures and found that many researchers are interested in whether ON-BH CABG surgery will benefit high-risk patients. Therefore, this article not only analyzes the overall data of all studies that meet the inclusion criteria, but analyzes the data for studies on high-risk patients (see Page 11-12, line 203-222), and then explores whether the ON-BH CABG surgery method is more effective in treating high-risk patients compared to C-CABG. We think it could be considered a subgroup analysis to a certain extent and help us get more objective and accurate results.

Shown in the text: Page 11-12, line 203-222

Comment 3: Please report in details on your sensitivity analysis, what were the numbers? figures?

Reply 3: We excluded a large sample size study through sensitivity analysis when analyzing the overall data on renal failure. The study was excluded because it significantly increased the heterogeneity due to more patients with renal failure before surgery in the ON-BH CABG group than in the C-CABG group with statistical difference. When it was removed, the  $I^2$  value of the index of heterogeneity dropped from 70% to 27%. We have added relevant data and picture in this article (see Page 10, line 190-191, figure 4).

Changes in the text: Page 10, line 190-191, figure 4

Comment 4: Please provide details on number of grafts / conduits utilized and how many were elective vs urgent CABG.

Reply 4: We added data on the average number of distal anastomoses and the number of urgent/ elective operations of all included studies (see Table 2, Columns 8-11).

Changes in the text: Table 2, Columns 8-11

Comment 5: What were the criteria for ON-BH vs C-CABG? how the decision was made?

Reply 5: The criteria for ON-BH CABG vs. C-CABG include the primary outcome and

secondary outcome. Primary outcome includes early postoperative mortality and long-term survival. Secondary outcome includes myocardial infarction, low output syndrome, arrhythmia, renal dysfunction, hemodialysis (necessary for renal failure), reoperation due to bleeding, cerebrovascular disease, pulmonary complications, intra-aortic balloon pump (IABP) use, number of distal anastomoses and incidence of incomplete revascularization (see Page 6-7, line 106-112). The above criteria are important indicators for clinical evaluation of the prognosis of coronary artery bypass graft surgery. The selection of these evaluation indicators is based on clinical work and determined by reading a large number of relevant research literature.

Changes in the text: Page 6-7, line 106-112

Comment 6: There is no patient demographics and euro / syntax score reported.

Reply 6: We added the demographic characteristics of each included study, such as average age and male-to-female ratio (see Table 2, Columns 4-7). We added the EuroSCORE of each included study (see Table 2, Columns 14-15).

Changes in the text: Table 2, Columns 4-7; Table 2, Columns 14-15

Comment 7: What were the re-intervention rates?

Reply 7: We added the re-intervention rates of each included study (see Table 2, Columns 12-13).

Changes in the text: Table 2, Columns 12-13

Comment 8: How was high risk patients defined? what were the criteria?

Reply 8: We detailed the criteria for high-risk patients in the eligibility criteria section. These standards may not be obvious in the text, here, we point out the specific location for you (see Page 6, line 87-92).

Changes in the text: Page 6, line 87-92

Comment: I think there is significant bias in reporting the outcomes, we need to be careful on making such statement that ON-BH is superior to C-CABG at short term.

Based on the results of this research, we modified part of statement in the conclusion section to make the final conclusion more objective and scientific (see Page 2-3, line 38-43 and Page 20, line 389).