Reviewer’s report

Title: Distal end side-to-side anastomoses of sequential vein graft to small target coronary arteries improve graft patency

Version: 2 Date: 26 February 2014

Reviewer: Soichiro Kitamura

Reviewer’s report:

"Major Compulsory Revisions"

Reviewer’s report

The conclusion of this paper is based upon intraoperative flow measurement which can be influenced by many other factors undescribed or unmeasured in this study, such as aortic pressure, use of coronary dilators and heart rates. These factors variate among patients but not reported at all in this study.

The authors stated that they believed the reason for initial poor graft flow was not technical errors, instead was associated with unfavorable hemodynamic characteristics---, but there was no evidence to show us readers. One may say that it was still due to technical errors (kinking, twisting, and/or anastomotic narrowing) because graft flow is determined by driving pressure, graft diameter and length (graft resistance) and distal coronary artery resistance which would not change much by anastomotic technique, if stenosis is not made. Turbulent flow due to size mismatch between the graft and recipient coronary artery may influence early or late graft patency due to blood clotting but not absolute flow volume itself during operation. The authors must explain the reasons for graft flow volume difference for us either by citing the previous hemodynamic studies or your experimental studies. The cited papers 4, 5 did not mention the flow-volume difference between the 2 anastomotic techniques.

Also, the authors admitted that in this study, there was no control arm and they described that it would violate medical ethics to have a control group of patients. But it seems to me that the concept is more emotional than scientific because it is not scientifically determined that distal end to side anastomosis is inferior to distal side to side anastomosis in obtaining the higher flow when the distal coronary artery is small. I would like to expect your experimental studies.

Lastly, there are no graft patency reports at all in this paper, but the title of this paper is “--- improve GRAFT PATENCY”, which is apparently misleading.

Level of interest: An article of limited interest

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.