Letters to the Editor

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Lower graft patency in off-pump compared with conventional coronary surgery

To the Editor:

We read with great interest a systematic review by Lim and associates¹ of randomized trials comparing graft patency after off-pump and conventional coronary surgery. On the basis of our recent meta-analysis of the same issue,² we agree absolutely with their conclusion. We would like, however, to comment on the systematic review by Lim and associates.¹

The initial analysis by Lim and associates¹ included 7 trials, but a trial that used exclusive composite inflow grafting was then excluded from further analyses of graft patency. The remaining 6 trials included a trial reporting 3-month patency by Linaas and associates³ published in 2004 and a trial by Kobayashi and colleagues⁴ but did not include a trial by Al-Ruzzeh and coworkers⁵ published in 2006. Linaas and associates,⁶ however, reported 1-year patency in 2006, and Kobayashi and colleagues⁴ merely examined less than 3-week graft patency. Therefore our own meta-analysis² of 6 randomized trials included the trial by Linaas and coworkers reporting 1-year patency⁶ instead of 3-month patency³ and included the trial by Al-Ruzzeh and coworkers⁵ but excluded the trial by Kobayashi and colleagues⁴ as eligible for review.

Lim and associates¹ did not perform a subanalysis for differences in patency rates by conduit type. In our meta-analysis,² however, data regarding arterial graft (excluding radial artery graft as available) patency and venous graft patency were abstracted from 5 of all 6 trials. Pooled analysis demonstrated a statistically non-significant benefit of conventional relative to off-pump coronary surgery for arterial graft (almost all of which was internal thoracic artery graft) patency but a statistically significant 28% increase in venous graft occlusion with off-pump relative to conventional surgery. Because of insufficient data, we² as well as Lim and associates¹

were unable to perform a subanalysis for differences in patency rates in the different vascular territories of the heart. Lower venous graft patency in off-pump surgery disclosed by our meta-analysis,² however, may indicate that off-pump surgery is more technically demanding than conventional surgery in territories other than the left anterior descending coronary artery, because most venous grafts are usually anastomosed to these territories.

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