Letters to the Editor

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 associates 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, we agree absolutely with their conclusion. We would like, however, to comment on the systematic review by Lim and associates.

The initial analysis by Lim and associates 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 Lingaas and associates published in 2004 and a trial by Kobayashi and colleagues but did not include a trial by Al-Ruzzeh and coworkers published in 2006. Lingaas and associates, however, reported 1-year patency in 2006, and Kobayashi and colleagues merely examined less than 3-week graft patency. Therefore our own meta-analysis of 6 randomized trials included the trial by Lingaas and coworkers reporting 1-year patency instead of 3-month patency and included the trial by Al-Ruzzeh and coworkers but excluded the trial by Kobayashi and colleagues as eligible for review.

Lim and associates did not perform a subanalysis for differences in patency rates by conduit type. In our meta-analysis, 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, we as well as Lim and associates 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, 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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References