

SURGERY

Mitral valve repair with CABG surgery

Postinfarction left ventricular remodelling commonly contorts the mitral valve, resulting in ischaemic mitral regurgitation (MR). Data from the Randomized Ischemic Mitral Evaluation now suggest that repairing the mitral valve during CABG surgery in patients with moderate ischaemic MR can improve heart function.

The trial researchers randomly assigned 73 patients with moderate MR to receive CABG surgery with or without mitral valve repair (MVR). Unsurprisingly, the duration of surgery, of intubation, and of hospital stay was prolonged in the group who underwent the combined procedure.

Patients who received MVR plus CABG surgery fared better than their counterparts. After 1 year, the primary outcome measure (peak oxygen consumption—a prognostic indicator for patients with ongoing heart failure) was 3.3 ml/kg/min in patients who underwent the combined procedure, compared with 0.8 ml/kg/min in those who underwent only CABG surgery. According to Weber's classification, patients in the combined

procedure group had mild-to-moderate impairment of aerobic capacity after follow-up, whereas patients in the CABG surgery only group had moderate-to-severe impairment. Other measures of heart function, including MR volume, plasma B-type natriuretic peptide concentration, and left ventricular end-systolic volume index, also improved to a greater extent in the CABG surgery plus MVR group than in those who underwent CABG surgery only. Survival was >90% in both groups at 1 year.

Studies with a larger population of patients and with a longer duration of follow-up are needed to investigate long-term survival and cardiac health in patients undergoing combined MVR and CABG surgery.

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Original article Chan, K. M. J. *et al.* Coronary artery bypass surgery with or without mitral valve annuloplasty in moderate functional ischemic mitral regurgitation: final results of the Randomized Ischemic Mitral Evaluation (RIME) trial. *Circulation* **126**, 2502–2510 (2012)