CORONARY ARTERY DISEASE

Individualize care for multivessel CAD

A new analysis of ‘real-world’ patient data has revealed that CABG surgery has an overall survival benefit over percutaneous coronary intervention (PCI) among individuals with multivessel coronary artery disease. CABG surgery was particularly favourable in patients with diabetes mellitus, peripheral arterial disease (PAD), or heart failure and among smokers. By contrast, outcomes for patients with none of these characteristics were predicted to be moderately better with PCI than with CABG surgery. In their *Annals of Internal Medicine* report, Mark Hlatky and colleagues write that “these variations in comparative effectiveness underscore the need to personalize treatment recommendations for coronary revascularization among patients with multivessel coronary disease”.

Hlatky *et al.* analysed data from 105,156 propensity-score matched Medicare beneficiaries aged >66 years who underwent CABG surgery or PCI for multivessel disease between 1992 and 2008. After 5 years of follow-up,

mortality was 25.9% with CABG surgery and 28.1% with PCI (HR 0.92, 95% CI 0.90–0.95, $P < 0.001$).

The investigators report that this finding is similar to that from a meta-analysis of 10 randomized, controlled trials. The benefits of CABG surgery were even greater among patients with comorbidities that increased their mortality risk or indicated the presence of diffuse atherosclerotic vascular disease, such as diabetes (HR 0.88), heart failure (HR 0.84), or PAD (HR 0.85). This study highlights the need for consultation between physicians and patients to determine the best treatment for the individual on the basis of their clinical characteristics.

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Original article Hlatky, M. A. *et al.* Comparative effectiveness of multivessel coronary bypass surgery and multivessel percutaneous coronary intervention. A cohort study. *Ann. Intern. Med.* doi:10.7326/0003-4819-158-10-201305210-00639