Letter to the Editor

Clinical implication of coronary artery bypass grafting with surgical ventricular reconstruction in clinical practice

Tao Yang[1], Han-Song Sun[1], Min-Jie Lu[2]

[1]Department of Cardiovascular Surgery, Cardiovascular Institute and Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, National Center for Cardiovascular Diseases, Beijing, China; [2]Department of Magnetic Resonance Imaging, Cardiovascular Institute and Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, National Center for Cardiovascular Diseases, Beijing, China

Correspondence to: Han-Song Sun, MD, PhD. Department of Cardiovascular Surgery, Cardiovascular Institute and Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, No. 167 North Lishi Road, Xicheng District, Beijing 100037, China. Email: ytt_419@163.com; Min-Jie Lu, MD, PhD. Department of Magnetic Resonance Imaging, Cardiovascular Institute and Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, National Center for Cardiovascular Diseases, No. 167 North Lishi Road, Xicheng District, Beijing 100037, China. Email: coolkan@163.com.

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"*In a large randomized control trial, CABG + SVR was not associated with a greater reduction in the rate of death or cardiac hospitalization than I-CABG. How do the authors explain this discrepancy*?" (1). In Jones *et al.*'s study, patients had dominant anterior left ventricular dysfunction (2). However, there's no information about the percentage of patients who had large, dyskinetic aneurysms. Patients with such aneurysms have poor hemodynamics and decreased cardiac function. Therefore, the conclusions of this trial may not be consistent in patients with akinesia, as compared with dyskinesia.

Patients with large aneurysms are very rare in developed countries nowadays, mostly because of the application of excellent revascularization techniques. However, in developing nations, many patients still suffer from the disease. In our center, 7% of patients undergoing coronary artery bypass graft (CABG) had dyskinetic aneurysms, and 1/5 of the aneurysms were large.

Optimal patient selection may be a key to successful CABG + surgical ventricular reconstruction (SVR) surgery. The indication of SVR in our center is the presence of anterior/anteroseptal myocardial infarction (MI) and dominant anterior/anteroseptal akinesia or dyskinesia of left ventricle (LV) (3). In other words, we perform ventricular aneurysmectomy when the ventricular wall is thin or lack of viability for the purpose of rupture prevention or non-functioning part exclusion.

Our surgical team was blinded to patient identification and reviewed the contrast-enhanced cardiovascular magnetic resonance imaging (CE-CMR) of all patients with left ventricular ejection fraction (LVEF) ≤35% to determine their eligibility for SVR. During surgery, the presence of anterior/anteroseptal scar tissue and dominant dyskinesia of LV made the team more inclined to perform SVR. Consequently, patients were divided into two groups: those who underwent isolated CABG (I-CABG) and those who underwent CABG + SVR. Therefore, the indication for I-CABG at our institution is more dependent on the surgeon's own experience.

In our center, On-pump beating-heart CABGs are not performed, while Off-pump CABGs are excluded from the present study because CABG + SVR have to be performed on-pump.

After the surgery, patients also received aspirin, clopidogrel, Beta blockers, diuretics, angiotensin-converting enzyme inhibitor (ACEI), statins, and nitrates regularly as usual (4). Currently, several new anti-heart failure medications are clinically available, including SGLT2

inhibitors, sacubitril/varsaltan, and vericiguat. These patients were followed up regularly at the outpatient clinic; therefore, received the new anti-heart failure medications mentioned above.

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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