Beneficial Outcome After Angioplasty of Unprotected Left Main Stenosis in Patients During Resuscitation

To the Editor:

With great interest, we have read the article by Takagi et al. that reported favorable results of elective percutaneous interventions (PCI) of unprotected left main (LM) coronary arteries in comparison with previous studies. However, because of a lack of well-designed prospective studies comparing aorto-coronary bypass (ACB) surgery with PCI, unrestricted recommendations of PCI of obstructed LM trunks cannot be made for patients with low surgical risk. However, in severely ill patients (under resuscitation and in cardiogenic shock), in whom surgical revascularization cannot be carried out, PCI of the LM trunk can also lead to favorable results:

We retrospectively analyzed the clinical outcome of all patients admitted to our hospital in cardiogenic shock during the last 2 years who had PCI of a critical lesion in the LM trunk immediately after or during cardiopulmonary resuscitation. During this period, 5 patients out of approximately 1000 who received PCI had been treated for critical LM stenosis. In all patients, PCI was successful (no catheter laboratory complications). Two patients died, one because of refractory rhythm disturbances and the other because of progressive heart failure. The remaining 3 patients survived, had no neurological deficit, and were successfully discharged from the hospital after a maximum stay of 3 weeks. In these patients, follow-up angiography after 2 months revealed no significant restenosis. Before follow-up, 2 of the 3 patients had also undergone ACB surgery because of severe diffuse coronary artery disease. On the basis of these encouraging data, we think coronary angiography and PCI of LM stenosis are beneficial and should be recommended in patients with cardiogenic shock shortly after or even during cardiopulmonary resuscitation because suitable alternatives are lacking.

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Response

We thank Dr Empen and colleagues for their interest in our article and the comments with respect to percutaneous treatment of unprotected left main (LM) trunk.

We agree that the advances in stent design and performance, along with improvements in operator technique and additional pharmacology, widen indications for coronary stenting, making feasible treatment of most complex lesion subsets, including LM trunk. However, results of percutaneous coronary interventions (PCI) performed on the LM trunk are inferior to the ones obtained after PCI in other locations; the incidence of in-hospital mortality rates range from 0% to 4% for elective procedures, and up to 13.7% when emergency procedures are included.

We reported our experience with elective percutaneous treatment of lesions involving unprotected LM, as we believe that including elective and emergency interventions makes the results difficult to interpret when recommending this procedure to a specific patient. Nevertheless, emergency treatment of severe stenosis or occlusions of the LM trunk with PCI can be a viable and live-saving option.

As Empen et al point out, it is important to maintain a critical attitude toward usage of PCI as a destination therapy in this setting. In fact, 2 of their 3 patients later underwent coronary artery bypass grafting.

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