

Clinical assessment of revascularized patients

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The use of noninvasive stress testing for the diagnosis and prognostic assessment of chronic angina patients is well established [1,2] and represents a determinant factor in the selection of treatment strategy [3]. Contrarily, after coronary revascularization (both percutaneous and surgical), there is lack of evidence to support clinical decision-making in the same population set.

Previous trials have consistently reported that, following coronary revascularization, many patients suffer recurrent ischemia [4,5], a finding associated with adverse outcome [6,7]. Nonetheless, clinical assessment by means of stress testing is considered inappropriate within 2 years after percutaneous coronary intervention (PCI) and within 5 years after coronary artery by-pass grafting (CABG) [8–10]. Indeed, following revascularization, besides a high rate of positive test results in patients with patent coronary arteries [10,11], there is a lack of evidence that repeated revascularization would change the course of the disease or patient outcomes.

Harb et al [12] addressed the issue of routine stress echocardiography (SE) in asymptomatic patients following coronary revascularization. Although only 1158 (55%) had completely normal SE, of a total of 2105 patients, clear signs of ischemia on SE were diagnosed in 262 patients (13%). Patients with recurrent ischemia had higher mortality compared with those without ischemia (8.0% vs 4.1%; $p = 0.03$; [HR], 2.10; 95% CI, 1.05-4.19; $P=0.04$) and, repeat revascularization (performed in 33% of patients with ischemia) did not significantly improve survival. The authors concluded that, careful consideration is warranted before the screening of asymptomatic patients is considered appropriate at any stage after revascularization. Similarly, the concept of the “uselessness of stress testing after coronary revascularization” was highlighted in the accompanying editorial.

The lack of favorable mortality outcomes is considered a mainstay finding from this study. However, why do these results generate such a pronounced reflection? Were we not aware of similar findings from other population studies? Indeed, it is now well accepted that coronary revascularization in chronic settings improves quality of life but has little or no impact on prognosis [4,13].

Screening tests are adopted with the hope of identifying and resolving coronary obstructions electively. In post-revascularized patients this would include surveillance for restenosis, graft patency, and completeness of revascularization, all deemed causes of ischemia recurrence. However, following revascularization, the rate of positive tests with no need for repeat revascularization due to patent coronary artery is particularly high [10]. Accordingly, in a cohort

of 220 highly selected post-revascularized patients we found that more than a third presented with myocardial ischemia that could not be justified by the above stated causes of recurrency [14]. The study by Harb et al adds that, even when revascularization is feasible, this will not change the outcomes of persistently ischemic patients. Taken together, it becomes clear that there is a flaw somewhere in the model of myocardial ischemia and these findings call for the need for a better understanding. Paradoxically, the recommended attitude is to avoid performing stress testing in asymptomatic post-revascularized patients. Will we ever stop contenting ourselves with burying the head in the sand and conducting a “pretend-not-to-see” policy? •

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