percutaneous or surgical approach, depending on coronary anatomy. In fact, in all three trials supporting the benefit of invasive strategy vs. conservative strategy, independently from the possibility to identify and treat the culprit lesion, an aggressive revascularization to all coronary segments presenting with significant (>70% at visual estimation) stenosis was protocol-mandated. The relatively high number of patients who received coronary artery bypass grafting (CABG) at 1 year, among those in whom myocardial revascularization was found to be feasible and clinically indicated in the invasive arm of these trials (50% in FRISC II, 34% in TACTICS-TIMI 18, and 37% in RITA 3), may also indirectly confirm that a multivessel intervention was often accomplished. This is clearly more in line with a complete revascularization strategy rather than a culprit lesion-oriented approach. Yet, it is noteworthy that in the FRISC II and TACTICS trials, despite the fact that the majority of the surgical procedures were performed in patients with left main or multivessel disease early after infarction (<7 days), CABG was associated with a low-risk of mortality (≈2%).

Thus, whether early intervention is undertaken in patients with NSTEACS, as currently recommended by ACC/AHA and ESC guidelines, any attempt to pursue a complete revascularization should be thoroughly carried out, well beyond and independently from the possibility to identify and treat the culprit lesion. Indeed, complete revascularization in this setting might be beneficial due to the deleterious progression of unstable plaques otherwise left untreated in the non-culprit vessel(s). The failure of current guidelines to address the issue of adequacy of coronary revascularization in patients affected by NSTEACS should be regarded as a potential source of incomprehension, and a position statement in this regard in the upcoming guidelines updates seems to be highly warranted.

References


Marco Valgimigli
Thoraxcenter
Erasmus MC
Room Bd 412
Dr Molewaterplein 40
Rotterdam
The Netherlands

Pierfrancesco Agostoni
Department of Cardiology
AZ Middelheim
Antwerp
Belgium

Giuseppe G.L. Biondi Zoccai
Interventional Cardiology Unit
S. Raffaele Hospital
Milan
Italy
do:10.1093/eurheartj/ehi404

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Complete myocardial revascularization: between myth and reality: reply

In the setting of unstable angina (UA) and non-ST elevation myocardial infarction (NSTEMI), by far, the most beneficial strategy is actually to identify patients at medium-high risk and treat them aggressively with intensive antiplatelet therapy, early angiography, and subsequent myocardial revascularization. This message is shared by most of the recent large-scale clinical trials that have been designed to address this issue.1–3 Deferral of intervention for any reason does not improve the outcome of such patients.4 Assumptions on the completeness of myocardial revascularization may only indirectly be inferred, and no absolute statement can be done in this direction on the pure basis of the prevalence of intervention in the aggressive arm. In our review, we deliberately did not underline the necessity of a complete revascularization of patients with multi-vessel coronary artery disease (CAD), as the present evidence does not point in this direction. We agree that patients with UA/NSTEMI have several complex non-culprit lesions,5 but this notion cannot be extrapolated to the belief that treatment of all plaques improves prognosis. The angiographic evaluation of non-culprit lesions in UA/NSTEMI patients is often inaccurate. The great advantage deriving from a percutaneous coronary intervention (PCI) strategy is that after the treatment of the culprit lesion, patients may undergo a functional non-invasive evaluation directed to unveil the haemodynamic significance of other lesions, although prediction of the risk of rupture remains elusive. Staged PCI might be the optimal strategy in UA/NSTEMI patients with multi-vessel CAD.6,7 Although it may increase catheterization laboratory occupancy, it could effectively decrease costs avoiding unnecessary treatment of all lesions.

References


Marco Zimarino
Institute of Cardiology and Center of Excellence on Aging
‘G. d’Annunzio’ University
San Camillo de Lellis Hospital
via Forlanini 50
66100 Chieti
Italy
Tel: +39 0871 358622
Fax: +39 0871 402817
E-mail address: m.zimarino@unich.it

Raffaele De Caterina
Institute of Cardiology and Center of Excellence on Aging
‘G. d’Annunzio’ University
San Camillo de Lellis Hospital
via Forlanini 50
66100 Chieti
Italy