

AMI with Non-Culprit Stenosis, How Can We Assess Functional Significance of the Lesions?

NAM, Chang-Wook MD, PhD

Division of Cardiology, Department of Internal Medicine

Keimyung University, Daegu, Korea

Multivessel disease (MVD) is present in about half of patients with an acute myocardial infarction (AMI) and is associated with a worse outcome. Previously, nonculprit stenoses are not normally assessed or treated during the acute phase of ACS, in part because the lesions may regress with time. Recent several studies document advantages of a complete revascularization during or staged percutaneous coronary intervention, which is now classified as Class IIb, level of evidence B. However, such an approach may result in overtreatment, because, in many cases, angiography alone can not provide information about the functional severity of MVD.

Fractional flow reserve (FFR) measurements can be a valuable guide for non-culprit lesions in MVD, but so far, only the reliability and safety of FFR measurements have been established in stable setting. The clinical implications of an FFR-guided treatment strategy in AMI patients with MVD are currently being tested in several randomized trials. According to the result of these trials, FFR can be used to reliably assess the hemodynamic significance of nonculprit coronary artery stenoses in patients undergoing PCI for AMI. Importantly, FFR values of these lesions generally do not significantly change between the acute phase and follow-up, suggesting that the initial assessment can guide a decision about the need for additional revascularization.

Although more confirmatory evidence is needed, there is growing confidence in FFR as a tool to help identify lesions that need to be treated at follow-up vs. those that do not require it.