

Complete Revascularization in Multivessel Disease Patients Presenting with Acute ST-Segment Elevation MI

Yair Elitzur, Chaim Danenberg, Chaim Lotan, Ronny Alcalai

Cardiology Department, Hadassah University Medical Center, Jerusalem, Israel

Background Multivessel disease has been reported in 20-60% of patients undergoing primary PCI for STEMI. The finding of non infarct-related lesions has been found to confer a worse prognosis in these patients. In spite of this observation, it is not clear whether treating the "non-culprit" lesions would improve the clinical outcome and what is the best timing for intervention. Recently updated ESC guidelines recommend a policy of culprit-only intervention in all STEMI patients not in cardiogenic shock. However, this policy is still controversial.

Methods Data was collected from the 2008 ACSIS. We recorded the reported strategies for management of non-culprit lesions for patient presented with STEMI, defined clinical criteria and outcomes associated with different treatment strategies.

Results Of 423 patients who underwent primary PCI 245(58%) had multivessel disease. In 130(53%) only the culprit lesion was treated. In 106(43%) the non-culprit lesions were also treated as follows: 24(9.8%) at primary PCI; 30(12.2%) at a separate procedure in the index hospitalization and 52(21.2%) after discharge. Factors associated with a culprit-only strategy were previous myocardial infarction, previous PCI and LAD as the infarct-related artery as well as major bleeding complication during hospitalization. Renal failure was not associated with either strategy.

Non-culprit intervention at primary PCI was associated with cardiogenic shock only in 5(20%) cases. In this group there was higher 30-day MACE (33.7%) and 30-day mortality rate (16.7%) compare to 16% and 6% respectively in all multivessel STEMI patients.

Conclusion Treatment of non-culprit lesion for STEMI patients is recommended more frequently in cases of first event and non anterior wall STEMI. It seems that non-culprit intervention during primary PCI is associated with worse outcome and should be considered in the presence of ongoing ischemia or shock. Long term prospective studies are still needed to evaluate to indications for non-culprit interventions.