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Acute Coronary Syndromes

OUTCOMES FOLLOWING MULTIVESSEL OR CULPRIT VESSEL REVASCULARIZATIONS AT THE TIME OF PRIMARY PERCUTANEOUS CORONARY INTERVENTION IN ST-ELEVATION MYOCARDIAL INFARCTION PATIENTS WITH CARDIOGENIC SHOCK AND MULTIVESSEL DISEASE

Poster Contributions
Poster Hall B1
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Session Title: STEMI: Mechanical and Pharmacologic Interventions
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Background: Evidence for multivessel (MV) revascularization in cardiogenic shock (CS) and multivessel disease (MVD) is still not enough. We compared outcomes following MV or culprit vessel (CV) revascularizations performed at the time of primary percutaneous coronary intervention (PCI) in ST-elevation myocardial infarction (STEMI) patients with CS and MVD.

Methods: From 16,620 STEMI patients who underwent primary PCI in a nationwide, prospective, multicenter registry between January 2006 and December 2012, eligible 510 patients with CS and MVD were selected and divided into MV (n=124, 24.3%) and CV (n=386, 75.7%) revascularization groups. The primary outcomes were in-hospital mortality and all-cause death during follow-up. A weighted Cox regression model was constructed using the inverse probability of treatment weighting to compare hazard rates of outcomes between the two groups.

Results: Compared to CV revascularization, MV revascularization had a significantly lower risk of in-hospital mortality (hazard ratio[HR] 0.263, 95% confidence interval[CI] 0.149-0.462, p<0.001) and all-cause death (HR 0.400, 95% CI 0.264-0.606, p<0.001), mainly due to lower cardiac death (HR 0.510, 95% CI 0.329-0.790, p=0.002). In addition, MV revascularization significantly decreased the risk of composite of all-cause death, recurrent myocardial infarction, and any revascularization (HR 0.728, 95% CI 0.55-0.965, p=0.027) during follow-up period.

Conclusion: This study showed that, compared to CV revascularization, MV revascularization at the time of primary PCI was associated with improved outcomes in STEMI patients with CS and MVD. Our results support the current guidelines of American College of Cardiology/American Heart Association on revascularizations in STEMI with CS and MVD.