P3127

Optimal revascularization strategy in non-ST-segment elevation myocardial infarction with multivessel coronary artery disease: staged vs. one-time vs. culprit-only revascularization

M. Kim[1], Y. Ahn[1], M.H. Jeong[1], D.S. Sim[1], Y.J. Hong[1], J.H. Kim[1], T.H. Ahn[2], K.B. Seung[3], H.S. Kim[4], H.C. Gwon[5], S.C. Chae[6], S.H. Hur[7], K.S. Cha[8]

[1]Chonnam National University Hospital, Gwangju, Korea (Republic of); [2]Gil Hospital, Incheon, Korea (Republic of); [3]Seoul St. Mary's Hospital, Seoul, Korea (Republic of); [4]Seoul National University Hospital, Seoul, Korea (Republic of); [5]Samsung Medical Center, Seoul, Korea (Republic of); [6]Kyungpook National University Hospital, Daegu, Korea (Republic of); [7]Keimyung University Hospital Dongsan Medical Center, Daegu, Korea (Republic of); [8]Pusan National University Hospital, Pusan, Korea (Republic of)

Background/Introduction: Although optimal revascularization strategy in patients with ST-segment elevation myocardial infarction with multivessel coronary artery disease (MVD) was well established, there are few studies which investigated optimal revascularization strategy in non-ST-segment elevation myocardial infarction (NSTEM) with MVD.

Purpose: We investigated 2-year clinical outcomes according to strategy of revascularization in patients with NSTEMI and MVD.

Methods: Between November 2011 and October 2015, a total of 2474 patients with NSTEMI and MVD who underwent successful percutaneous coronary intervention were analyzed from the Korea Acute Myocardial Infarction Registry-National Institute of Health (staged 308, one-time 1043 and culprit-only 1123 patients). We did not include patients with left main disease and cardiogenic shock. Primary endpoint was major adverse cardiac events (MACE: the composite of cardiac death, myocardial infarction [MI] or target-vessel revascularization [TVR]) during 2-year follow-up (median 737 days [interquartile range 705–764]). We also analyzed the of all-cause mortality, stroke and non-TVR.

Results: Baseline characteristics such as age, gender, and prevalence of atherosclerotic risk factors between multivessel revascularization (MVR; staged or one-time revascularization) and CVR were similar. There was also no difference in symptom to balloon time in 2 groups. MACE occurred in 305 patients (12.3%) during 2-year follow-up. MVR could reduce incidence of MACE (10.2% vs. 14.9%; adjusted hazard ratio [HR] 1.50 for CVR, 95% confidence interval [CI] 1.20–1.88, $p<0.001$), all-cause death (8.4% vs. 12.1%; adjusted HR 1.45 for CVR, 95% CI 1.13–1.87, p=0.003) and non-TVR (1,9% vs. 7.0%; adjusted HR 3.99 for CVR, 95% CI 2.55–6.27, $p<0.001$). There was no difference in incidence of stroke between MVR and CVR. We also analyzed same analysis between staged and one-time revascularization. Complete revascularization was more achieved in one-time revascularization group compared to staged revascularization group (62.0% vs. 76.1%, $p<0.001$). In multivariate Cox-regression analysis, staged revascularization was not associated with improved clinical outcomes in terms of MACE (HR 0.74, 95% CI 0.50–1.09, p=0.126), all-cause death (HR 1.07, 95% CI 0.69–1.68, p=0.759), stroke (HR 1.75, 95% CI 0.68–4.52, p=0.245) and non-TVR (HR 2.56, 95% CI 0.75–8.68, p=0.132). Analysis by propensity score matching and inverse probability of treatment weighting did not significantly affect the results.

Conclusions: MVR reduced 2-year adverse cardiac events in patients with NSTEMI and MVD compared to CVR. However, staged revascularization was not superior to one-time revascularization for reducing MACE among NSTEMI patients with MVD who received MVR.