Abstract: P3127

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

Authors:
M Kim1, Y Ahn1, MH Jeong1, DS Sim1, YJ Hong1, JH Kim1, TH Ahn2, KB Seung3, HS Kim4, HC Gwon5, SC Chae6, SH Hu7, KS Ch8, 1Chonnam National University Hospital - Gwangju - Korea (Republic of), 2Gil Hospital - Incheon - Korea (Republic of), 3Seoul St. Mary's Hospital - Seoul - Korea (Republic of), 4Seoul National University Hospital - Seoul - Korea (Republic of), 5Samsung Medical Center - Seoul - Korea (Republic of), 6Kyungpook National University Hospital - Daegu - Korea (Republic of), 7Keimyung University Hospital Dongsan Medical Center - Daegu - Korea (Republic of), 8Pusan National University Hospital - Pusan - Korea (Republic of).

Topic(s):
Non-ST-Elevation Myocardial Infarction (NSTEMI)

Citation:
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 (NSTEMI) 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-TV.

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

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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.