

Clinical Outcomes of Treatment of Unprotected Left Main Coronary Artery Lesion in Acute Myocardial Infarction Setting: Korean AMI Registry

건양의대

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Background: Treatment of unprotected left main coronary artery (ULMCA) is still vague in acute myocardial infarction (AMI) setting, because the acuity and critical condition may preclude the opportunity for emergent bypass surgery. We assessed the clinical features, real world practice pattern and clinical outcomes of treatment of ULMCA in AMI setting from Korea AMI registry (KAMIR). **Subjects and Methods:** Study subject consisted of 10,979 consecutive patients with AMI enrolled in KAMIR; 241 patient (2.2%) with ULMCA as infarct-related artery (IRA) and 10,738 patients without ULMCA. Patients with ULMCA were likely to be older and higher diabetes than those without ULMCA. We selected 241 patients without ULMCA using propensity patching for age, gender, risk factors and diagnosis for ST-elevation MI for further analysis. Of course, ULMCA group had higher Killip class, more resuscitation at admission, cardiogenic shock, higher serum creatinine and NT-proBNP level. Conservative treatment was performed more frequently in ULMCA group (18.5% vs. 6.5%, $p=0.023$) as an initial treatment strategy. In STEMI, PCI was less performed in ULMCA group (86% vs. 96%, $p=0.009$) with lower success rate (90%vs. 96%, $p=0.020$) than non-ULMCA group. In non-STEMI, these patterns were similar to STEMI with higher bypass surgery rate (18% vs. 4%, $p<0.001$) in ULMCA group. In-hospital mortality was higher in ULMCA group (14.1% vs. 5.0%, $p=0.001$). Cardiogenic shock was the only independent predictor (OR; 13.2, $p=0.001$) for in-hospital mortality in ULMCA group and total subjects. However, there was no significant differences in 1, 6 and 12-months clinical outcomes in terms of death, MI and revascularization rate between 2 groups after excluding the dead during hospitalization. Cumulative 12-months mortality showed significantly higher in ULMCA group ($p=0.001$), however, the mortality difference was only seen during hospitalization. **Conclusions:** AMI with ULMCA as IRA is rare, but fatal. Long-term mortality of ULMCA as IRA is similar with non-ULMCA lesion out of survived patients from hospital. Cardiogenic shock is the most important predictor for in-hospital mortality.

Clinical Impact of Thrombus Aspiration during Primary Percutaneous Coronary Intervention: Results from Korea Acute Myocardial Infarction Registry

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Background: The role of thrombus aspiration (TA) as an adjunct to primary percutaneous coronary intervention (PPCI) remains a matter of controversy. **Methods and Results:** A total of 2,105 patients enrolled in the nationwide prospective Korea Acute Myocardial Infarction Registry, a cohort of 745 (35.4 %) patients who underwent TA during PPCI was compared with 1,360 (64.6 %) patients who underwent conventional PCI without TA. Clinical outcomes at 12-month of overall enrolled patients and subgroups according to key variables were assessed using Cox regression models adjusted by propensity score. Although there was no significant difference among overall patients, in subgroup analyses, administration of glycoprotein (GP) IIb/IIIa inhibitor during PPCI [adjusted hazard ratio (HR) 0.329, 95 % confidence interval (CI) 0.126 to 0.860, $p=0.023$] and left anterior descending (LAD) as a culprit lesion (adjusted HR 0.516, 95 % CI 0.275 to 0.971, $p=0.040$) were the settings, in which TA was associated with a lower major adverse cardiac events (MACE) rate compared with non-TA. **Conclusions:** Although TA does not improve clinical outcomes in overall patients who underwent PPCI, TA for LAD occlusion improves 12-month MACE. Furthermore, use of GP IIb/IIIa inhibitor with TA has synergetic effect on clinical outcomes.