

TCT-249

Hypoxic Liver Injury at Admission as a Predictor of In-hospital Death in Patients with ST-Elevation Myocardial Infarction (STEMI) Undergoing Primary Percutaneous Coronary Intervention (PCI): Data from INTERSTELLAR Cohort

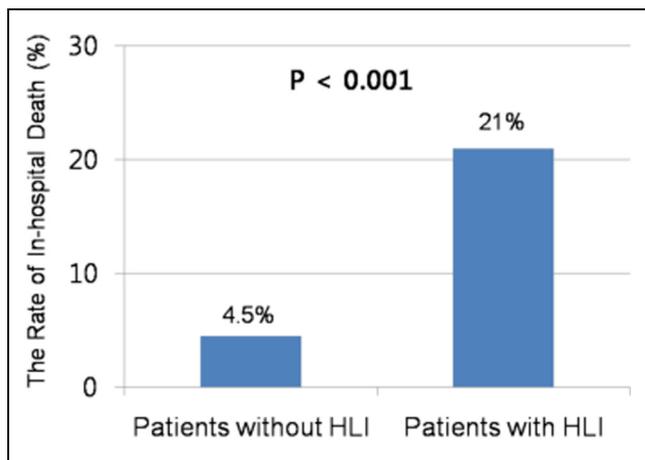
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BACKGROUND Recently, hypoxic liver injury (HLI) has been proposed as a novel prognostic marker for ST-elevation myocardial infarction (STEMI) in small study. So, we evaluated the prognostic implication of HLI at admission in patients with STEMI who underwent primary percutaneous coronary intervention (PCI) in large cohort.

METHODS From 2007 to 2014, a total of 1540 consecutive patients (1221 males, mean age 61±13 years old) with STEMI underwent primary PCI were analyzed retrospectively. HLI was defined as ≥ 2-fold increase of serum alanine aminotransferase (ALT) above upper normal limits the time of presentation. Primary endpoint was in-hospital death.

RESULTS Of all patients, the HLI was noted in 7.7% patients. Compared to patients without HLI, the patients with HLI were younger (58 ± 14 vs. 61±13 years, p=0.043), had lower ejection fraction (43 ± 15 vs. 48±17%, p=0.002). A total of 89 in-hospital death (5.8%) were occurred. Compared to patients without in-hospital death, those patients were older (69 ± 11 vs. 60 ± 13 years old, p<0.001), had higher ALT (65 ± 69 vs. 36 ± 40 IU/L, p<0.001) at the time of presentation and had lower left ventricular ejection fraction (49 ± 12 vs. 27 ± 19, p<0.001). The HLI at the presentation was associated with high in-hospital death (21% vs. 4.5%, p <0.001) and was an independent predictor of in-hospital death (HR 5.69, CI 3.12-10.38, p<0.001) after adjusted by age, diabetes, sex and shock.

Variable	Univariate analysis			Multivariate analysis		
	HR	95% CI	P	HR	95% CI	p
Age	1.06	1.04-1.08	<0.001	1.06	1.04-1.08	<0.001
Diabetes	2.45	1.59-3.77	<0.001	2.23	1.38-3.61	0.001
Shock	10.68	6.61-17.26	<0.001	7.41	4.39-12.51	<0.001
HLI	5.64	3.40-9.37	<0.001	5.69	3.12-10.38	<0.001
Male	1.94	1.22-3.07	0.005			



CONCLUSIONS The HLI is an independent predictor of in-hospital death in patients with STEMI underwent primary PCI.

CATEGORIES CORONARY: Acute Myocardial Infarction

KEYWORDS Liver failure, ST-segment elevation myocardial infarction

TCT-250

Prognostic Impact of Combined Contrast-Induced Acute Kidney Injury (CI-AKI) and Hypoxic Liver Injury (HLI) in Patients with ST Elevation Myocardial Infarction (STEMI) Who Underwent Primary Percutaneous Coronary Intervention (PCI) : Results from the INTERSTELLAR Registry

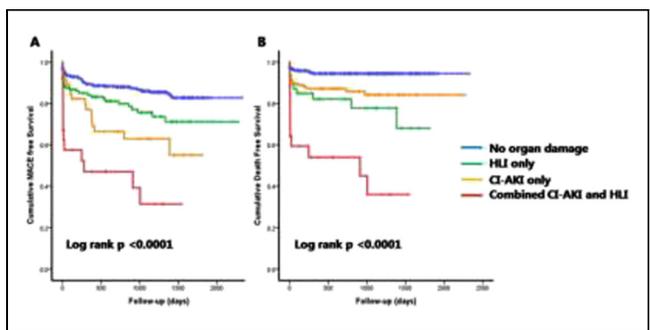
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BACKGROUND We sought to evaluate the prognostic impact of contrast-induced acute kidney injury (CI-AKI) and hypoxic liver injury (HLI) in patients with ST-elevation myocardial infarction (STEMI) underwent primary percutaneous coronary intervention (PCI)

METHODS From 2007 to 2014, a total of 667 consecutive patients (77.2% male, mean age 61.3±13.3 years) with STEMI underwent primary PCI were analyzed. CI-AKI was defined as an increase in serum creatinine of ≥0.5 mg/dl or a 25% relative rise, within 48h after index procedure. HLI was defined as ≥2-fold increase of serum aminotransferase above upper normal limit at admission. Patients were divided into four groups according to their CI-AKI and HLI states (group 1: no CI-AKI and no HLI, group 2: only HLI, group 3: only CI-AKI, group 4: both CI-AKI and HLI). The primary endpoint was major adverse cardiac events (MACE) during follow-period, defined as all-cause mortality or non-fatal MI.

RESULTS Of the 667 patients, 465 patients (69.7%) were allocated in group 1; 129 patients (19.3%) in group 2; 47 patients (7.0%) in group 3 and 26 patients (3.9%) in group 4. Over a mean follow-up period of 2.2±1.6 years, there were 65 MACEs (42 all-cause mortality and 23 non-fatal MI) with an event rate of 9.7%. The rate of MACE and all-cause mortality were 5.2% and 3.4% in group 1, 14.0% and 10.1% in group 2, 21.3% and 6.4% in group 3, and 50.0% and 38.5% in group 4, respectively. Consequently, Kaplan-Meier survival analysis for MACE and all-cause mortality revealed that group 4 was associated with worst clinical outcomes (log rank p-value< 0.0001).

CONCLUSIONS Combined CI-AKI after index procedure and HLI at admission is associated with poor clinical outcomes in patients with STEMI underwent primary PCI.



CATEGORIES CORONARY: Acute Myocardial Infarction

KEYWORDS Contrast-induced acute kidney injury, MACE, STEMI