

increased mortality, irrespective of the presentation. Substantial patients with STEMI experience no chest pain and are given a low priority score at the triage of emergency department. We aimed to determine the impact of non-chest pain complaint as a presenting symptom on the DTB time and clinical outcomes in patients with STEMI.

Methods: A total of 11,417 STEMI patients who underwent primary PCI were derived from the Korea Working Group on Myocardial Infarction from 2005 to 2012 and compared according to typical chest pain or non-chest pain complaint as a presenting symptom. The primary outcomes were 12-month mortality and the composite of major adverse cardiac events (MACE, defined as death, non-fatal myocardial infarction, and revascularization).

Results: Compared to patients with typical chest pain (n=9,948, 87.1%), patients with non-chest pain complaint (n=1,469, 12.9%) were older, more female, and had higher incidence of hypertension and diabetes, and also had higher incidence of anterior infarct and higher Killip class. The time delay was also significant in door-to-laboratory arrival time (53 vs. 64 min, p<0.001), laboratory arrival-to-balloon (20 vs. 23 min, p<0.001), and the DTB time (75 vs. 89 min, p<0.001). Non-chest pain complaint was an independent determinant of the DTB time both in adjusted models and in multivariate linear regression analysis. Patients with non-chest pain complaint had more in-hospital death (4.1% vs. 11.5%, p<0.001), 12-month mortality (6.5% vs. 16.3%, p<0.001), and the composite of MACE (12.2% vs. 22.5%, p<0.001).

Conclusions: The delays in identification of STEMI and reperfusion treatment were greater and associated with worse clinical outcomes in patients with non-chest pain complaint as a presenting symptom. A triage using electrocardiogram should be considered in these patients.

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Which is the Ideal Revascularization Strategy in Patients Presenting with Acute Coronary Syndrome and Proximal LAD Stenosis? Results from the ACUTY Study

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Background: Proximal LAD (pLAD) lesions are associated with increased cardiovascular risk in the setting of acute coronary syndrome (ACS). Surgical versus percutaneous revascularization improves outcomes including mortality in complex stable CAD. However, the impact of different revascularization strategies in ACS patients with pLAD lesions remains unknown.

Methods: We performed a post-hoc analysis of patients in the ACUTY trial (n=13,819) presenting with a critical stenosis of the pLAD who underwent subsequent revascularization with a surgical or percutaneous approach (PCI). Major adverse events comprised of death, myocardial infarction, repeat revascularization, stroke, and bleeding were compared at 30 days and 1-year.

Results: Among the 842 patients we studied, revascularization was performed with PCI and coronary artery bypass grafting (CABG) in n=562 (67%) and n=280 (33%) respectively. Baseline clinical and angiographic characteristics were well balanced between groups. Patients in the CABG group were more likely to undergo angiography later than PCI (median time first drug-angiography, 43 vs. 4 hours, P<0.01). PCI was associated with an increase rate of revascularization at 1 month and 1 year, without significant difference in other clinical endpoints (Table 1).

Conclusions: Although surgical revascularization of proximal LAD during ACS reduces further revascularization, it does not seem to improve the survival and MI rates at 1-year compared with PCI.

	PCI (n=560)	CABG (n=280)	P value
1-month outcomes			
MACE (death, MI, revascularization)	13.4%	15.4%	0.46
NACE (death, MI, revascularization, and major bleeding)	19.1%	17.5%	0.45
All-Cause Mortality	2.1%	3.6%	0.22
Myocardial Infarction	10.2%	12.7%	0.33
Unplanned Revascularization	4.3%	1.4%	0.03*
Stroke	0.2%	0.7%	0.26
1-year outcomes			
MACE	22.4%	19.7%	0.49
Death or MI	15.4%	16.4%	0.65
All-Cause Mortality	4.3%	4.7%	0.72
MI	12.7%	13.1%	0.88
Unplanned Revascularization	12.7%	5.2%	0.001*
TLR	8.5%	n/a	

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Safety and efficacy of Bivalirudin monotherapy in patients with non-ST segment elevation myocardial infarction undergoing PCI: Results from the ACUTY Study

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Background: There are limited data on the effects of bivalirudin monotherapy compared to standard antithrombotic therapy (heparin plus glycoprotein IIb/IIIa inhibitor – GPI) on the outcomes of higher –risk acute coronary syndromes (ACS) patients with positive biomarkers on admission. We examined the clinical outcomes among positive biomarker patients undergoing percutaneous coronary intervention (PCI) in the large-scale prospective, randomized ACUTY trial.

Methods: The ACUTY trial was a multicenter, randomized trial assessing the safety and efficacy of bivalirudin alone or bivalirudin plus GPI vs. heparin plus GPI among 13,819 patients with moderate and high-risk ACS, 7,789 of whom underwent PCI. The in-hospital and 30-days primary endpoints were composite ischemia (death, MI, or unplanned TVR for ischemia), Non-CABG major bleeding, and net adverse clinical events (NACE=composite ischemia or major bleeding).

Results: A total of 4,728 PCI patients presented with a positive biomarker at the time of admission. Of those, 1,532 were randomized to heparin plus GPI and 1,611 to bivalirudin alone. There were no relevant baseline differences between treatment groups regarding clinical profile, TIMI risk score, antiplatelet medications and DES use. Outcomes by treatment group at 30-days and 1-year are shown in the table. In a multivariate model, use of bivalirudin was not a predictor of composite ischemic outcomes up to one year (hazard ratio [95% CI]=1.12 [0.97, 1.29], p=0.1239), but was associated with a reduction in major bleeding.

	Heparin + GPI N=1532	Bivalirudin alone N=1611	p value
30-days			
Mortality	0.9%	1.5%	0.14
MI	5.8%	7.2%	0.0958
Urgent TVR	2.4%	2.1%	0.5720
NACE	13.5%	12.6%	0.4482
Composite ischemic outcome	8.2%	9.3%	0.3001
Non-CABG major bleeding	7.1%	4.1%	0.0002
1-year			
Mortality	4.0%	3.8%	0.8293
Composite ischemic outcomes	17.4%	19.0%	0.0629