

intervention (PCI) in the era of current ST-segment elevation myocardial infarction (STEMI). Our aim was to study the impact of prolonged (>24 hours) or brief (≤24 hours) anticoagulation on infarct size (IS) and microvascular obstruction (MVO) assessed by cardiac magnetic resonance (CMR) at 30 days, and on 2D-echocardiographic findings at 1 year in patients with STEMI who underwent primary PCI in the INNOVATION randomized trial (NCT02324348).

METHODS Among 114 patients enrolled in the trial, 76 (66.7%) received prolonged anticoagulation (median duration 72.6 hours) and 38 (33.3%) received a brief (median duration 5.0 hours). CMR could be evaluated in 105 (92.1%) patients, and evaluable 2D-echocardiography results were present in 89 (78.1%) patients. Left ventricular (LV) remodeling was defined as a ≥20% increase in end-diastolic volume at the 1 year follow-up.

RESULTS Patients with prolonged anticoagulation were significantly younger, had lower level of glucose, and were more likely to have single-vessel coronary disease. However, complete revascularization was less often achieved in patients with prolonged anticoagulation; a prolonged anticoagulation was associated with lower rate of complete ST resolution. After adjusting for differences in baseline variables, prolonged anticoagulation did not reduce larger IS (defined as >75th percentile of IS, 19.7% [prolonged anticoagulation] versus 35.6% [brief], adjusted odds ratio [OR]: 0.589, 95% confidence interval [CI]: 0.215-1.610, *p*=0.303) nor cut the incidence of MVO (50.7% versus 52.9%, adjusted OR: 0.869, 95% CI: 0.319-2.358, *p*=0.782). Also, patients who received prolonged or brief anticoagulation after primary PCI experienced similar rate of LV ejection fraction <35% (3.2% versus 7.4%, adjusted OR: 0.347, 95% CI: 0.025-4.712, *p*=0.426), left atrial volume index >32 mL/m² (38.7% versus 29.3%, adjusted OR: 1.484, 95% CI: 0.392-5.618; *p*=0.674), and LV remodeling (24.2% versus 14.8%, adjusted OR: 1.493, 95% CI: 0.363-6.135, *p*=0.579) evaluated by 2D-echocardiography at 1 year.

CONCLUSION These data suggest that prolonged anticoagulation for routine prophylaxis may not provide benefit after successful primary PCI in patients with STEMI. Therefore, routine post-procedural anticoagulation after primary PCI should not be recommended unless a well-established indication is present.

CRT-100.20

Longer Duration of Chest Pain Before Hospital Arrival in ST-elevation Myocardial Infarction Patients Is Associated With Adverse Cardiovascular Outcomes



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INTRODUCTION The duration between onset of angina and reperfusion is a critical determinant of infarct size and the likelihood of adverse myocardial remodeling in patients with ST-elevation myocardial infarction (STEMI). There are no definite data examining the prognostic importance of duration of angina before reaching hospital (prehospital delay) on cardiovascular outcomes after percutaneous coronary intervention (PCI).

METHODS We performed a retrospective, multi-center study of patients presenting with STEMI who received PCI within 90 minutes between January 2014 and December 2016 to Buffalo General and South Buffalo Mercy Hospitals. Exclusion criteria were patients with prior history of heart failure, absence of pre-discharge echocardiogram, or unclear report of angina duration. The duration of angina from onset to reaching the hospital (onset-to-door time) was obtained from electronic charts. Patients with onset-to-door time of angina ≤6 hours versus >6 hours were compared. The primary outcome was the development of major adverse cardiovascular events within 1-year, defined as a composite outcome of death, recurrent MI, target vessel revascularization, or stroke. The left ventricular ejection fraction (LVEF) on pre-discharge echo was recorded.

RESULTS A total of 1546 consecutive patients were screened; 262 patients were included in the final analysis. Of those, 176 patients had onset-to-door time of ≤6 hours, and 86 patients with symptoms >6 hours. Patients with symptoms >6 hours had significantly higher MACE compared to patients with symptoms ≤6 hours (64.0% vs.

29.9%, RR 2.2, *p*= 0.035). No significant difference was found in LVEF after PCI between the two groups. There were no significant differences in age, sex, race, history of hypertension, diabetes, smoking status, prior MI, or statin use between the two groups. Patients with symptoms >6 hours were more likely to be on aspirin (38% vs. 18.5%, *p* <0.01).

CONCLUSION Our study shows that a longer duration of chest pain before hospital arrival is associated with worse cardiovascular outcomes within 1 year after PCI. Such differences are independent of other cardiovascular comorbidities including left ventricular systolic function.

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Impact of Chronic Kidney Disease on Guideline Directed Interventions Among Patients Admitted With Acute ST-Elevation Myocardial Infarction: A Nationwide Inpatient Sample 2012-2014



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INTRODUCTION Studies have shown that patients with chronic kidney disease (CKD) less frequently receive guideline-directed interventions for acute ST-elevation myocardial infarction (STEMI) as compared to patients without CKD. The objective of this study is to assess utilization of guideline-directed interventions among patients with CKD admitted for acute STEMI.

METHODS A nationwide inpatient sample database from 2012-2014 was used to identify all patients admitted to hospital with STEMI using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes (n=534,845). Patients with dialysis-dependent CKD (n=8100) and CKD without dialysis (n=51,285) were compared to non-CKD patients (475,460). Outcome measured was utilization of interventions. Hierarchical logistic regression was performed, and *p*<0.05 was considered as the level of significance.

RESULTS Diagnostic coronary angiography was performed in 85.91% patients without CKD. Compared to patients without CKD, only 68.70% of patients with CKD not on dialysis (*p*<0.0001) and 64.69% of dialysis dependent CKD patients (*p*<0.0001) underwent diagnostic coronary angiography. Percutaneous coronary intervention (PCI) was performed in 77.38% of patients without CKD. Compared to patients without CKD, only 56.18% of patients with CKD not on dialysis (*p*<0.0001) and 48.02% of dialysis-dependent CKD patients (*p*<0.0001) underwent PCI. Detailed data on outcomes are highlighted in form of percentage in Figure 1.

CONCLUSION Compared to non-CKD patients, CKD patients who present to hospital with STEMI receive substantially lower guideline-directed interventions. Health-care policies and quality improvement projects should be implemented to provide better level of care to these patients.

VARIABLES	CKD without HD	No CKD	Overall	P-value	CKD with HD	No CKD	Overall	P-value
Coronary Angiography				<0.0001				<0.0001
No	31.38	14.09	15.77		35.31	14.09	14.45	
Yes	68.70	85.91	84.23		64.69	85.91	85.55	
Percutaneous Coronary Interventions				<0.0001				<0.0001
No	43.82	22.62	24.68		51.98	22.62	23.11	
Yes	56.18	77.38	75.31		48.02	77.38	76.89	
Drug-Erasing Stents				<0.0001				<0.0001
No	68.10	47.06	48.81		73.15	47.06	47.50	
Yes	31.90	52.94	51.19		26.85	52.94	52.50	
Non Drug-Erasing Stents				<0.0001				<0.0001
No	63.78	61.06	61.56		68.30	61.06	61.37	
Yes	36.21	38.94	38.44		31.70	38.94	38.63	
Types of PCI				<0.0001				<0.0001
Single-vessel PCI	84.89	87.12	86.96		81.29	87.12	87.06	
Multi-vessel PCI	15.11	12.88	13.05		18.71	12.88	12.94	
Thrombolysis				<0.0001				<0.0001
No	99.11	98.85	98.88		99.57	98.85	98.96	
Yes	0.89	1.15	1.12		0.43	1.15	1.04	
CABG				<0.0001				<0.0001
No	92.85	93.87	93.87		92.80	93.87	93.95	
Yes	7.15	6.13	6.13		7.20	6.13	6.05	
Use of Intra-aortic Balloon Pump				<0.0001				<0.0001
No	89.23	91.30	91.10		89.44	91.30	91.27	
Yes	10.77	8.70	8.90		10.56	8.70	8.73	
Use of Percutaneous Ventricular Assist Device				<0.0001				<0.0001
No	99.03	99.38	99.35		98.46	99.38	99.36	
Yes	0.97	0.62	0.65		1.54	0.62	0.64	
Use of Cardiopulmonary Bypass				<0.0001				0.5237
No	91.37	95.28	95.19		95.12	95.28	95.27	
Yes	8.63	4.72	4.81		4.88	4.72	4.73	