RESULTS Among 481 patients, 103 patients (21.4%) had SI≧0.7. No statistically significant difference was observed in baseline characteristics between the two groups. Patients with SI≧0.7 had a lower left ventricular ejection fraction than those with SI<0.7 (56 [35-60] % vs. 60 [45-64] %, p=0.035). Patients with SI≧0.7 had a higher rate of cardiogenic shock on admission (2.9% vs. 0.3%, p=0.032). Patients with SI≧0.7 had a higher, albeit statistically insignificant, incidence of cardiogenic shock after admission (5.0% vs. 1.9%, p=0.074). The total incidence of cardiogenic shock was higher in patients with SI≧0.7 (7.8% vs. 2.1%, p=0.001). Patients with SI≧0.7 had a higher in-hospital mortality (4.9% vs. 0.5%, p=0.006) than those with SI<0.7.

CONCLUSION An elevated SI was associated with a higher in-hospital mortality in patients with NSTEMI.

CRT-200.30
Elevated Glucose Level Upon Presentation Predicts Left Main and/or Three Vessel Disease in Patients Without Diabetes Presenting With Non-ST-Segment Elevation Myocardial Infarction

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BACKGROUND Elevated glucose level upon presentation has been reported to predict worse clinical outcomes in patients with acute coronary syndrome. However, the association between elevated glucose level and angiographic findings have not been fully elucidated.

METHODS We performed a retrospective analysis of consecutive patients presenting with non-ST-segment elevation myocardial infarction (NSTEMI) who underwent coronary angiography within five days after presentation from January 2013 to June 2014. Patients with pre-admission diagnosis of diabetes were excluded. Glucose levels were measured upon admission. Blood glucose was defined elevated when blood glucose was greater than median glucose level in our cohort. Patients were categorized into elevated glucose group and control group. Obstructive coronary artery disease was defined as stenosis greater than or equal to 50% in the left main coronary artery and 70% in any other coronary artery. Baseline and angiographic characteristics were recorded. In addition, in-hospital major adverse cardiac events (MACE) including death, recurrent myocardial infarction, and target vessel revascularization were recorded and compared between the two groups.

RESULTS After excluding 189 patients with pre-admission diagnosis of diabetes, 292 patients were included in the final analysis. The median glucose was 117 mg/dL (interquartile; 93, 121 mg/dL). Patients with elevated glucose had a higher rate of hypertension (77.5% vs. 61.8%, p=0.006) compared to patients in control group. Left ventricular ejection fraction was similar between the two groups (median [interquartile]; 60 [42-60] % vs. 60 [45-64] %, p=0.73). Patients with elevated glucose had a higher peak troponin I value (1.86 [0.18-8.59] ng/ml vs. 0.49 [0.08-4.51] ng/ml, p=0.046) than patients in control group. Patients with elevated glucose had a higher rate of left main and/or three-vessel disease (LM/3VD) (37.1% vs. 18.2%, p<0.001) compared to patients in control group. Multivariate analysis showed that elevated glucose was an independent predictor for LM/3VD (odds ratio 2.19; 95% confidence interval 1.19 to 4.02; p=0.011). No statistically significant difference was observed in in-hospital MACE between the two groups (1.1% vs. 1.0%, p=0.92).

CONCLUSION In patients without pre-admission diagnosis of diabetes presenting with NSTEMI, elevated glucose level on presentation was an independent predictor for LM/3VD.

CRT-200.31
Angina Following Percutaneous Coronary Intervention Is Common and Not Affected by Stent Type

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BACKGROUND Although metallic coronary stents significantly reduce angina pectoris when compared to optimal medical therapy, angina after percutaneous coronary intervention (PCI) remains frequent. We therefore sought to compare the incidence of any angina during the 1 year after PCI among the spectrum of commercially available metallic stents.

METHODS Metallic stent type was classified as: bare metal stent, Cypher, Taxus Express, Xience V, Promus Element, and Resolute.

The primary endpoint was patient-reported angina within 1 year of PCI. Multivariable logistic regression was performed to assess the independent association of stent type with any angina at 1 year.

RESULTS Overall, 8804 patients were queried in regard to angina symptoms; 32.3% experienced angina at some point in the first year after PCI (Figure). Major adverse cardiovascular events (MACE), a composite of all-cause mortality, target vessel revascularization, and Q-wave myocardial infarction, increased with angina severity: 6.8% for patients without angina, 10.0% for patients with class 1 or 2 angina, and 19.7% for patients with class 3 or 4 angina (p<0.001 for trend). After multivariable adjustment, there was no significant association between stent type and angina at 1 year after PCI. Baseline Canadian Cardiovascular Society class 3 or 4 angina, history of coronary artery bypass grafting, and history of PCI were associated with a higher likelihood of angina at 1 year; increasing age, male gender, presentation with acute coronary syndrome, and higher stented length were associated with less angina.

CONCLUSION Metallic stent type is not associated with the occurrence of angina at up to 1 year after PCI. In addition, angina after PCI is frequent, and worsening severity of angina is associated with higher rates of MACE at 1 year.
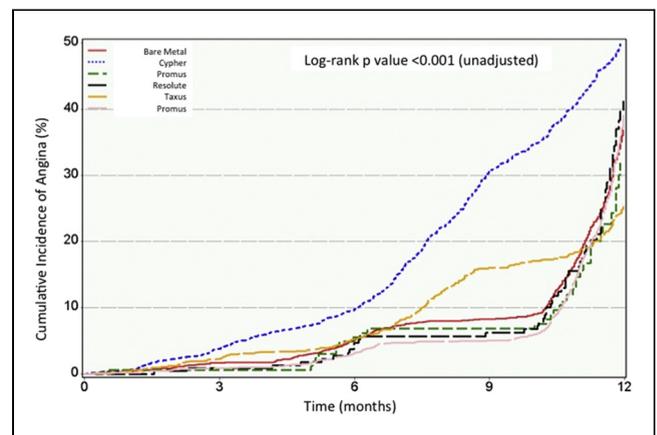
CRT-200.32
Predicting the Outcome of Reperfusion Acutely in Patients With STEMI - Derivation and Validation of the ATI Score

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BACKGROUND Restoration of effective myocardial reperfusion by primary percutaneous coronary intervention (PPCI) in patients with STEMI is not predictable. A method to assess the likelihood of a suboptimal response to conventional pharmaco-mechanical therapies could be beneficial. We aimed to derive and validate a scoring system that can be used acutely at the time of coronary reopening to predict the likelihood of downstream microvascular impairment in patients with STEMI.

METHODS A score estimating the risk of post-procedural microvascular injury defined by an index of microcirculatory resistance (IMR) > 40, was initially derived in a cohort of 85 STEMI patients (Derivation cohort). This score was then tested and validated in three further cohorts of patients (Retrospective (30 patients), Prospective (42 patients) and External (29 patients).

RESULTS The ATI score [Age (> 50 = 1); pre-stenting IMR (> 40 and < 100 = 1; ≥ 100 = 2); Thrombus score (4=1; 5=3)] was highly predictive of a post-stenting IMR > 40 in all the four cohorts (AUC:0.87; p <0.001-Derivation cohort, 0.84; p: 0.002-Retrospective cohort, 0.92; p< 0.001-Prospective cohort and 0.81; p: 0.006-External cohort). In