the whole population an ATI score ≥ 4 presented a 95.1% risk of final IMR> 40, while no cases of final IMR> 40 occurred in the presence of an ATI score < 2.

CONCLUSION The ATI score appears to be a promising tool capable of identifying patients during PPCI that are at the highest risk of an adverse outcome following revascularization.

CRT-200.33

Comparison of Platelet Reactivity on Ticagrelor in African-American Patients With Acute Coronary Syndromes Versus Stable Coronary Artery Disease

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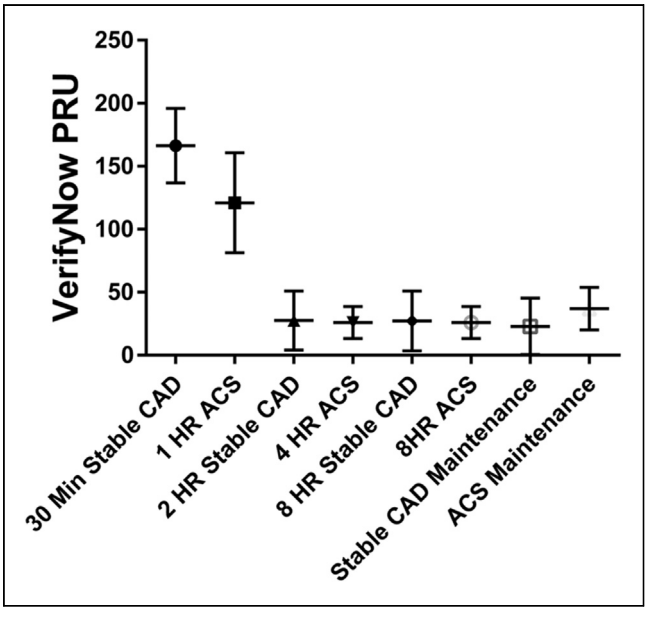
BACKGROUND Ticagrelor significantly decreases platelet reactivity and improves clinical outcomes compared with clopidogrel, but little is known regarding the effects of ticagrelor upon platelet reactivity in African-Americans (AA) with an acute coronary syndrome (ACS). We therefore performed pharmacodynamic studies of platelet reactivity following treatment with ticagrelor in AA patients presenting with ACS and compared them to historical controls of AA with stable coronary artery disease (CAD).

METHODS We prospectively enrolled AA with ACS, defined as ≥2 of the following: chest pain, significant ST changes, or troponin elevation. Blood samples were collected 1, 4, and 8 hours following a loading dose of ticagrelor 180 mg and at 30 days on a maintenance dose of 90 mg twice daily. Platelet reactivity was measured with VerifyNow and reported as P2Y12 reactivity units (PRU). Mean PRU values were then compared to AA with stable CAD that underwent platelet reactivity testing at 30 minutes, 2 hours, and 8 hours after a loading dose and 7 days on a maintenance dose.

RESULTS We enrolled 24 AA with ACS, compared to 32 AA with stable CAD. The two groups were similar in regards to age, gender, and comorbidities. Among patients with ACS, 21 presented with NSTEMI, 1 with STEMI, 2 with unstable angina, and 58% received clopidogrel before ticagrelor. PRU levels were generally similar between the ACS and stable CAD groups, with values at 30 minutes and 1 hour significantly higher than all other time points (Figure). In regards to time points in common between the two groups, PRU levels were also similar: 26 ± 30 in ACS vs. 27 ± 66 in stable patients at 8 hours (p=0.93); and 37 ± 40 in ACS vs. 23 ± 62 in stable patients during maintenance therapy (p=0.31).

CONCLUSION AA patients with ACS and receiving ticagrelor have levels of platelet reactivity similar to AA patients with stable CAD.



CRT-200.34

Assessment of Coronary Stent Expansion Using Stentboost Enhancement in Comparison to Intravascular Ultrasound

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BACKGROUND Stent underexpansion is a major risk factor for in-stent restenosis and acute in-stent thrombosis . Intravascular ultrasound (IVUS) is the gold standard for detection of stent underexpansion. StentBoost (SB) is a recently developed technique that allows an improved angiographic visualization of the stent.

AIM To compare stent expansion parameters by IVUS , SB enhancement and QCA and to evaluate the efficiency of SB guiding the stent postdilatation.

METHODS From June 2013 to August 2014, 33 stents (30 patients) were evaluated after eclective PCI using QCA, SB enhancement and IVUS .Optimization of stent deployment of inadequately expanded stents using balloon postdilatation was done then post dilatation reassessment using the previous 3 modalities.

RESULTS The maximal SD measured by IVUS & SB was (3.45 ± 0.62 vs 3.55 ± 0.56 , p 0.53) respectively with correlation (p <0.0001 & r 0.74). the minimal SD measured by IVUS & SB was (2.77 ± 0.53 vs 2.58 ± 0.56, p 0.07) respectively with correlation (p <0.0001 & r 0.68). The maximal SD measured by IVUS & QCA (3.45 ± 0.62 vs 2.97 ± 0.59, p 0.009) respectively with correlation (p <0.0001 & r 0.69). The minimal SD measured by IVUS & QCA (2.77 ± 0.53 vs1.88 ± 0.60, p 0.001) respectively with correlation (p <0.0001 & r 0.63). The maximal SD measured by SB & QCA was (3.55 ± 0.56 vs 2.97 ± 0.59, p 0.001) respectively with correlation (p <0.0001& r 0.61). The minimal SD measured by SB & QCA was (2.58 ± 0.56 vs 1.88 ± 0.60, p 0.001) respectively with correlation (p 0.003 & r 0.49). the post-dilatation stent diameters obtained by QCA, SB and IVUS were significantly higher than poststenting diameters.

CONCLUSION Stent Boost enhancement has superior correlations for stent expansion measured by IVUS when compared with QCA. SB enhancement improved stent visualization and identify stent under-expansion and can guide stent postdilatation .

Key words: Quantitative coronary angiography (QCA), Intravascular ultrasound (IVUS), Stent Boost (SB) enhancement, stent diameter (SD).

CRT-200.35

Multi-stenting in Infract-Related Artery was Similarly Effective and Safe Compared With Single Stenting in ST-Elevation Myocardial Infarction Patients Underwent Primary Percutaneous Coronary Intervention With Contemporary Drug-eluting Stents: A 3-year Clinical Follow-Up Data by A Propensity Score Matched Analysis

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BACKGROUND Since ST-elevation myocardial infarction (STEMI) occurs due to plaque rupture rather than atherosclerotic stenosis, it

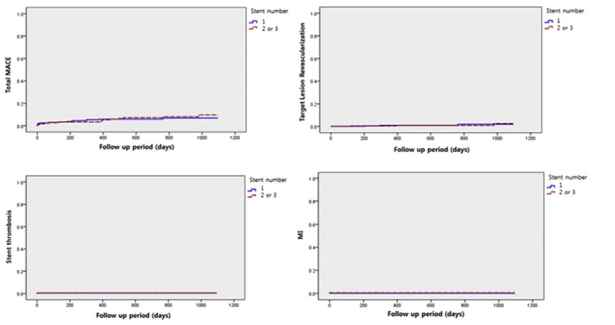
could be concerned that atherosclerotic lesion length itself and number of stents according to lesion length are matter indeed. There are not enough large studies reveals whether multiple overlapping drug-eluting stenting (DES) is similarly safety and effective compared with single stenting in infarct-related artery (IRA) in STEMI patients (pts) undergoing primary percutaneous coronary intervention (PCI).

METHODS Among 12,431 pts enrolled in a nationwide, multicenter registry (Korea AMI Registry, KAMIR) from July 2012, eligible 2798 STEMI pts who had single IRA and underwent primary PCI with DESs were classified into Single stent (n=2473) and Multi stents (2 or 3 stents, n=325) groups. Propensity score (PS)-matched analysis was performed in 598 patients. Individual and composite clinical outcomes up to 3 years were compared between the two groups.

RESULTS Baseline clinical and angiographic characteristics were similar between the two groups after PSM analysis. In multivariate regression, the no of stents in IRA was not an independent predictor of major adverse cardiac events (MACE). Kaplan-Meier estimates showed that MACE-free survival was not significantly different between the two groups (93.6 vs. 93.5%, p = 0.982) and PS-matched (94.3% vs.93.6%, p = 0.758) cohorts (Figure). Target lesion revascularization (TLR), MI, and stent thrombosis-free survival was similar between the two groups.

CONCLUSION This study showed that the multi-stenting in IRA in STEMI pts with single vessel disease undergoing primary PCI with DESs was similarly effective and safe as compared with those of single stenting up to 3 years.

Figure. MACE, TLR, Stent thrombosis, and MI-free survival in STEMI patients between single stenting vs. multi-stenting in infarct-related artery in propensity score matched cohorts.



CRT-200.36

Long-term Clinical Outcomes in Patients With Acute Myocardial Infarction With Co-morbidity: 3-year Follow-up Results After Propensity Score Matched Analysis

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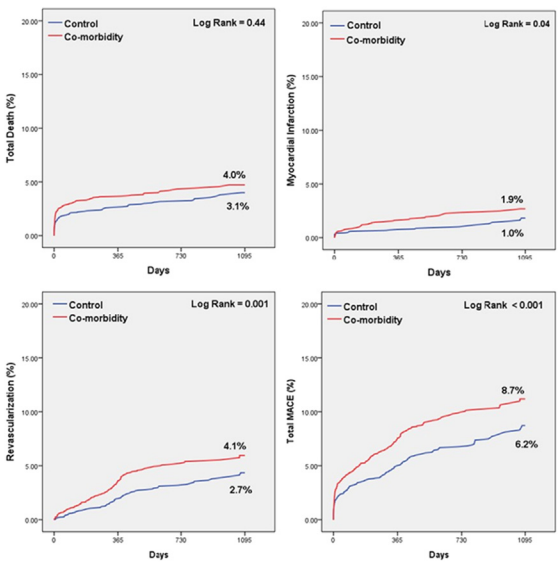
BACKGROUND Patients (pts) with acute myocardial infarction (AMI) are associated with a higher mortality rate and usually have higher incidence of co-morbid condition. However, long-term clinical outcomes of AMI pts with comorbidity are unclear.

METHODS Among 12,431 pts enrolled in a nationwide in Korea AMI Registry (KAMIR), 9,109 AMI pts who underwent successful percutaneous coronary intervention (PCI) with drug-eluting stents (DESs) were classified into two groups; 1) Pts with co-morbidity (including hypertension, diabetes, dyslipidemia, heart failure and cerebrovascular accidents, N=5,715) and 1) Pts without co-morbidity disease (control, N=3,394) groups. After propensity score matched (PSM) analysis from 6,152 pts, clinical outcomes up to 3 years were compared between the two groups.

RESULTS After PSM analysis, baseline clinical characteristics were similar between the two groups. At 3 years, the incidence of myocardial infarction (MI, 1.9% vs. 1.0%, p = 0.04), revascularization (4.1% vs. 2.7%, p = 0.001) and total major adverse cardiac events (MACE, 8.7% vs. 6.2%, p < 0.001) were higher in the pts with co-morbidity group. However, the incidence of total death was not significantly different between the two groups (4.0% vs. 3.1%, p = 0.44, Figure).

CONCLUSION In this study, AMI pts undergoing PCI with DES and have co-morbidity was associated with higher incidence of recurrent AMI, repeat revascularization and MACE as compared with those of AMI pts without co-morbidity, suggesting more meticulous control of co-morbidity would be required.

Figure. Clinical outcomes up to 3-years after propensity score matched analysis in AMI between patients with co-morbidity disease vs. control group.



CRT-200.37

Impact of Insulin Treatment on Coronary Artery Spasm in Diabetes Patients as Assessed by Intracoronary Acetylcholine Provocation Test

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BACKGROUND Diabetes mellitus (DM) is known to be a risk factor of significant coronary artery disease (CAD) and endothelial dysfunction. However, currently there is limited data regarding the impact of insulin treatment on significant coronary artery spasm (CAS) in real world clinical practice particularly in Asian population.

METHODS A total 703 consecutive patients (pts) underwent intracoronary acetylcholine (Ach) provocation test were enrolled. Provocation test was performed by incremental dosages (20, 50, 100ug) of Ach until get significant response (>70% narrowing). The study population were divided into insulin treatment group [Insulin group;