major adverse cardiac events (MACE) between NSTEMI patients with complete versus target-vessel revascularization.

**METHODS** We analyzed retrospectively 114 patients, mean age 67 ± 12 years, 69% male, hospitalized with NSTEMI between June and December 2012 and followed-up 12 months. Inclusion criteria were angiographic data for significant atherosclerotic involvement of more than one coronary artery and proceeding to percutaneous coronary intervention (PCI). 71 patients (62%) underwent target-vessel revascularization, the rest 43 (38%) - complete revascularization.

**RESULTS** Demographic and clinical characteristics did not differ significantly between groups except for smoking (more prevalent in target-vessel revascularization group). Procedure success was 91% in target-vessel revascularization group and 88% in patients with complete revascularization. Rate of early in-hospital complications was not significantly different between the groups: mortality - 2 (2.7%) versus 1 (2.3%), periprocedural myocardial infarction - 11.7% versus 12.3%, in target-vessel and full revascularization groups, respectively.

During one-year follow-up combined incidence of MACE (mortality, myocardial infarction, revascularization) was significantly reduced after full revascularization (4 patients, 9.3%) compared to target-vessel intervention (12 patients, 9%), p < 0.01. The difference in MACE was driven mostly by the significant reduction in the rate of repeat revascularization and mortality.

**CONCLUSION** NSTEMI patients have improved prognosis with complete versus target vessel revascularization during one-year follow-up, without increase in the rate of in-hospital complications.

**TCTAP A-015**

**Bleeding Events of STEMI Patients After PCI Is Associated with a Genetic Risk Score Based on High-Risk Genetic Polymorphisms**

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**BACKGROUND** Gene polymorphisms of ABCB1, CYP2C19, PON1 and P2Y12 may influence pharmacodynamics and clinical events of clopidogrel treatment. We assessed the hypothesis that a genetic risk score based on identified high-risk single nucleotide polymorphisms (SNPs) would be associated with bleedings in clopidogrel-treated Chinese STEMI patients after percutaneous coronary intervention (PCI).

A total of 510 consecutive patients with STEMI who received an uneventful PCI and were exposed to clopidogrel treatment for 12 months, were enrolled in the single-center registry. There were 7 high-risk SNPs selected from ABCB1 (rs1045642, rs2235047), CYP2C19 (*17), PON1 (rs662, rs854560) and P2Y12 (rs6789390, rs6809699) genes, which were detected by the ligase detection reaction. The primary clinical safety endpoint was the incidence of major bleeding events. Major bleeding was quantified according to bleeding academic research consortium definition (BARC) criteria, including type 3 and 5 in the analysis. The follow-up period was 12 months.

**RESULTS** Overall, 46 BARC-3 bleedings occurred (9.0%) which included 11 (2.2%) cases of BARC 3b bleedings and 35 (6.8%) cases of BARC 3a bleedings. After adjustment for traditional clinical risk factors, multivariate logistic regression analysis identified SNPs significantly associated with bleedings were ABCB1 (rs1045642, rs2235047) and P2Y12 (rs6789390, rs6809699). A genetic risk score was constructed by summing the number of risk alleles. As a continuous variable, the risk score resulted in an OR of 1.225 per unit increase in score (95%CI=1.098-1.601, p=0.003). The addition of this genetic risk score significantly increased AUC from 79.3% to 82.4% (p<0.03), and significantly improved the predictive ability on bleeding risk by 20% using the NRI approach (p<0.01).

**CONCLUSION** This genetic score was significantly associated with bleedings after PCI in our study population.

**TCTAP A-016**

**Sequential Therapy of Higher Doses of Atorvastatin Could Decrease Soluble CD40L and Increase Coronary Blood Perfusion with Improvement of Endothelial and Ventricular Function in STEMI Patients During Primary Percutaneous Coronary Intervention**

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**BACKGROUND** Studies indicate that soluble CD40 ligand (sCD40L) is associated with disease progression and severity in acute coronary syndrome (ACS), while it may provide a mechanistic link between reperfusion and myocardial repulsion as well as cardiac function. However, it is still controversial whether sequential therapy of higher doses of atorvastatin could provide more benefits in regulating sCD40L, coronary blood perfusion and ventricular function compared with a conventional dose in STEMI patients undergoing primary PCI.

**METHODS** After screening, 196 STEMI patients met the inclusion criteria and were included for analysis. All of them were divided into three groups by using an electronic spreadsheet indicating the group assignment by random numbers: Group A (n=48) (received 80mg of Atorvastatin before primary PCI, post-PCI switch up Atorvastatin 40mg for 1 month, and Atorvastatin 20mg for 5 months); Group B (n=43) (received no pre-PCI loading dose of atorvastatin but did receive Atorvastatin 40mg for 1 month and then Atorvastatin 20mg for 5 months); Group C (n=45) (received only post-PCI Atorvastatin for 6 months). TIMI flow grade and Correction TIMI Frame Count (CTFC) after PCI would be recorded and compared among three groups. In addition, the serum sCD40L and endothelial nitric oxide synthase (eNOS) would be measured at admission and 1-day, 7-day, 1-month, 6-month after PCI. Improvement of cardiac function would also be evaluated during the follow-up period.

**RESULTS** Patients among the three groups were well matched in demographic and clinical characteristics (P>0.05). Patients in Group A exhibited much better myocardial repulsion indicated by CTFC compared with Group B or Group C (no differences were observed in TIMI flow Grade 3 among three groups after PCI (P>0.05)). The levels of sCD40L in Group A were significantly lower than those in Group B or Group C on 1-day and 7-day (P<0.05), but not in later sampling points (P>0.05). Patients in Group A also gained higher levels of eNOS and showed improvement in heart performance, with significant improvement in their left ventricular ejection fraction (LVEF) (P<0.05). Patients in Group B had relatively higher levels of eNOS as well as significant improvement in LVEF compared with Group C (P<0.05), although no statistical differences were observed in sCD40L comparison (P>0.05). No severe adverse reactions were observed during study period.

**CONCLUSION** For STEMI patients, the sequential therapy of atorvastatin during primary PCI could significantly lower serum sCD40L, shorten CTFC and increase eNOS and LVEF. The sequential therapy of atorvastatin treatment may reduce inflammatory response, improve myocardial repulsion and mend cardiac function with acute coronary syndromes undergoing primary PCI. (ClinicalTrials.gov Identifier: NCT 01334671)

**TCTAP A-017**

**Favorable Impact of Early Primary Percutaneous Coronary Intervention for the Oldest Old Patients with Acute Myocardial Infarction**

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**BACKGROUND** Recent studies of elderly patients demonstrate high mortality from acute myocardial infarction (AMI) and increased risk with advancing age. Although many oldest old AMI patients (> 85 years) have been treated by primary percutaneous coronary intervention (pPCI) in the aging society, the prognostic importance of early pPCI for these patients is unknown.

**METHODS** We evaluated consecutive 564 AMI patients (mean age 68.5 ± 12.9, male 77%) from Mie ACS Registry in Japan from January to December 2013. The pPCI was performed 86% patients. Patients were divided into two groups according to the age: oldest old patients (> 85 years old: n=62) and non-oldest old patients (< 85 years old: n=502). Primary end point was defined as 30 days in-hospital mortality.

**RESULTS** Percentage of chest pain at presentation of oldest old patients was tend to be lower than non-oldest patients (77 vs. 85%, p>0.05). However, there was no difference in prevalence of pPCI between two groups, 30 days in-hospital mortality of oldest patients was significantly higher than non-oldest patients (19.4 vs. 7%, p<0.01). Even in the patients with pPCI, oldest patients showed poor 30 days in-hospital mortality compared to the non-oldest patients (11.5 vs. 5.1%, p<0.05). Only when analyzed patients with early pPCI (> 3 hours after onset), oldest patients showed similar favorable 30 days in-hospital mortality.

**CONCLUSION** Early primary PCI is associated with shorter mortality compared to the non-oldest patients (Figure 1B). In