TCT-252
Prognostic value of ACEF (age, creatinine, ejection fraction) score of one year mortality in 30-day survivors undergoing percutaneous coronary intervention after acute myocardial infarction
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Background: Predictors of one year mortality in 30-day survivors after acute myocardial infarction (AMI) have not been elucidated yet. Recently, several studies reported that ACEF (age, creatinine, ejection fraction) score could provide a prognostic information in patients undergoing percutaneous coronary intervention (PCI) after AMI. Accordingly, the aim of this study is to assess whether ACEF score could predict one year mortality in 30-day post-AMI survivors.

Methods: Between November 2005 and August 2011, 12,000 30-day post-MI survivors (8760 men; mean age = 62.2±12.4 year-old) underwent PCI were analyzed in this study from Korea AMI registry. ACEF score was calculated on the basis of the modified formula; [age left ventricular ejection fraction] + 1 if serum creatinine >2mg/dl. Patients were categorized into 3 groups according to tertiles of ACEF score; ACEF_low (<1.0, n=3,755), ACEF_mid (1.0-1.39, n=4,470), and ACEF_high (≥1.4, n=3,775).

Results: During the follow-up, ACEF score was significantly higher in 30-day post-MI survivors with 12-month mortality (1.28±0.04 versus 1.95±0.82, p <0.001). In Cox proportional hazards model, ACEF score (hazard ratio [HR] 2.26, 95% confidence interval [CI] 2.03 – 2.51; p <0.001) was an independent predictor of 12-month mortality after adjusting for conventional clinical risk factors. In receiver operating characteristics curves, area under the curve (AUC) of ACEF score for predicting 12-month mortality was 0.788 (sensitivity 71.2% and specificity 74.4%), and optimum cut-off value was 1.47. Kaplan-Meier survival curve showed the patients with ACEF score of 1.47 or more (6.9% versus 1.0%; log-rank p <0.001) had significantly higher 12-month mortality compared with patients with ACEF score <1.47. The 12-month mortality was 0.4% in ACEF_F_low, 1.4% in ACEF_mid, and 6.1% in ACEF_high, respectively (p<0.001). Adjusted HRs for 12-month mortality were 1 (reference), 3.11 (95%CI 1.70 – 5.70; p<0.001), 2.70 (95%CI 1.43 – 5.14; p=0.001), and 10.35 (95%CI 5.83 – 18.47; p<0.001), respectively.

Conclusions: The ACEF score provides useful prognostic information for clinicians to advise patients who have survived the acute phase of AMI. More intensive management is required in post-MI survivors with high ACEF score.

TCT-253
Calling 911 Anywhere Best Determines Reduction in Total Ischemia Time in ST-Elevation Myocardial Infarction (STEMI)
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Background: Since consistent rapid door-to-balloon (D2B) times have largely been performed, the first medical contact (FMC) to hospital arrival by ambulance has been proposed as a better goal of gender, age, race, off hours onset of pain, and method of initial transport was performed.

Results: A total of 197 patients were direct STEMI patients with 168 arriving by ambulance with 56 arriving at the referral hospital by EMS and 139 arriving by POV with 18.47 min. Male gender was present in 31 patients (77.5%). Mean age was 57.91±9.8 years. Pre-procedure TIMI flow was 0 in 52.6% of the patients; Thrombectomy was performed in 31 patients (79.5%), and additional balloon pre-dilatation in 22 subjects (56.5%). After BVS implantation a TIMI flow III was achieved in 35 patients (89.7%), no reflow was observed in 1 case (2.6%), and distal embolization in 7 cases (17.9%). The post-procedure %diameter stenosis was 15.3 ± 8.2%. MI SYNTAX score I and II were respectively 10.5 (7.5-15.0) and 8.0 (5.0-13.0). OCT analysis was performed in a total of 25 patients. The mean lumen area was 7.76±1.88 mm2, minimum lumen area 5.61±1.48 mm2, minimum flow area 5.29±1.54 mm2, mean incomplete stent apposition area 0.131±0.179 mm2, mean prolapse area 0.58±0.28 mm2, mean intraluminal material area 0.013±0.017 mm2; mean %malapposed struts 2.80±4.11%, scaffolds with >5% malapposed struts were 5. At 30 days follow-up the MACE rate was 2.6%, this was due to a non-target vessel Non Q-Wave myocardial infarction (MI), Target vessel failure rate was 0%. No target vessel revascularisation, and target vessel MI were reported. No cases of cardiac death or scaffold thrombosis were observed.

Conclusions: The use of BVS in patients presenting with acute myocardial infarction was observed to be safe and feasible. Angiographic and OCT data showed optimal acute results with high rate of TIMI III flow, low residual stenosis and good apposition of the scaffold.

TCT-254
Everolimus Eluting Bioresorbable Vascular Scaffolds In Patients With ST-Segment Myocardial Infarction. Safety Feasibility and Acute Performance
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Background: No data are currently available on the use of everolimus eluting bioresorbable vascular scaffolds (BVS) in patients presenting with ST-segment elevation myocardial infarction (STEMI).

Methods: The present report is a prospective, single arm, single centre study evaluating the safety, feasibility and performance of BVS for treatment of consecutive patients presenting with STEMI. Baseline quantitative coronary angiography and post-implantation optical coherence tomography (OCT) data were evaluated. Clinical outcomes are reported at 30-day follow-up.

Results: The intent-to-treat population comprises a total of 40 patients. The procedural success was 97.5% (39/40 patients). Mean door-to-needle time was 30.33 ± 18.51 min. Male gender was present in 31 patients (77.5%). Mean age was 57.91±9.8 years. Pre-procedure TIMI flow was 0 in 52.6% of the patients; Thrombectomy was performed in 31 patients (79.5%), and additional balloon pre-dilatation in 22 subjects (56.5%). After BVS implantation a TIMI flow III was achieved in 35 patients (89.7%), no reflow was observed in 1 case (2.6%), and distal embolization in 7 cases (17.9%). The post-procedure %diameter stenosis was 15.3 ± 8.2%. MI SYNTAX score I and II were respectively 10.5 (7.5-15.0) and 8.0 (5.0-13.0). OCT analysis was performed in a total of 25 patients. The mean lumen area was 7.76±1.88 mm2, minimum lumen area 5.61±1.48 mm2, minimum flow area 5.29±1.54 mm2, mean incomplete stent apposition area 0.131±0.179 mm2, mean prolapse area 0.58±0.28 mm2, mean intraluminal material area 0.013±0.017 mm2; mean %malapposed struts 2.80±4.11%, scaffolds with >5% malapposed struts were 5. At 30 days follow-up the MACE rate was 2.6%, this was due to a non-target vessel Non Q-Wave myocardial infarction (MI), Target vessel failure rate was 0%. No target vessel revascularisation, and target vessel MI were reported. No cases of cardiac death or scaffold thrombosis were observed.

Conclusions: Only the method of arrival to the initial hospital was significant in multivariable models of total ischemic time. In both metro and regional settings, calling 911 for EMS is the key determinant for subsequent TIMI in STEMI and leads to time reduction in every step to reperfusion.

TCT-255
Favourable Long-term Survival Of Out-of-hospital Cardiac Arrest Patients Managed With Systematic Coronary Angiogram On Admission
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Background: Coronary angiogram (CA) with percutaneous coronary intervention (PCI) on admission may improve survival to hospital discharge in out-of-hospital