Methods and Results: Patients with ACS (N=121) receiving IABP support were enrolled. Survivors and non survivors were compared at 30-days. Mortality rate was 47%. The survivors (N=64) had a higher proportion of non-cardiogenic shock (CS) (p<0.001), more IABP usage as back up for a revascularization procedure (p=0.002), and fewer history of resuscitation (p=0.043) and mechanical ventilator support (p<0.001). Compared to survivors, the non survivors had significantly higher leukocyte level (p=0.033), higher creatinine level (p<0.001), higher blood sugar on admission (p=0.001), higher serial CKMB level (p=0.002) and higher uric acid level (p<0.001), but significantly lower left and right ventricular function (p=0.014 and p=0.003, respectively). At 30 days, non-ST elevation (STE) ACS patients had higher cumulative survival than STEMI patients (log rank, p<0.001) and non CS non STE-ACS patients showed the highest cumulative survival (p=0.001).

By multivariable analysis, heart rate ≥100 x/minute prior to IABP insertion was the strongest predictor of 30-days mortality (Hazard Ratio 5.66; 95% CI 1.47 - 21.70; p=0.011).

Conclusion: In ACS patients presenting with cardiogenic shock, resuscitated or need for mechanical ventilation, the short term mortality remains high, despite the use of IABP. IABP appears to be favourable in non cardiogenic shock ACS patients especially non STE-ACS. A heart rate of ≥100 x/minute prior to IABP insertion was the strongest predictor of 30-days mortality.

The Metabolic Syndrome is Highly Prevalent in Young Patients with Acute Myocardial Infarction

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Background: Recent studies in large worldwide populations demonstrate that the metabolic syndrome (MS) increases the risk of acute myocardial infarction (AMI) without gender, ethnic or regional variations. The risk of AMI associated with MS appears no greater than the risk conferred by its individual components.

Objective: The goal of the study is to investigate the prevalence of metabolic syndrome in young patients with acute myocardial infarction (AMI) treated with percutaneous coronary intervention (PCI) and to compare the ATP III individual components of MS in young versus old patients.

Method: A retrospective analysis of the University of Southern California interventional cardiology database was performed to identify patients with AMI (STEMI and NSTEMI, n=779) treated with PCI between January 2008 and June 2011. Two groups were generated according to the patient’s age: young (≤45 years of age, n=698) and old (>45 years of age, n=698). Patients with MS were identified by the presence of at least 3 of the ATP III criteria and components of the MS were separately compared by age.

Results: The MS was more prevalent in young patients with AMI (60.3% vs. 44.8%, p=0.02). Older patients were found to have higher rates of Hypertension (40.7% vs. 64.6%, p<0.001), Triglyceride levels were higher in younger patients (21mg/dl vs. 153mg/dl, p-value=-0.03), while HDL levels (38.1mg/dl vs. 40.1mg/dl, p=0.23) and obesity rates (BMI < 30kg/m2, 25.9% vs. 26.5%, p=0.97) were similar between the groups. Single vessel CAD was more common in younger with MS patients (44.6% vs. 71.7%, p<0.001), as well as total occlusion of the infarct related artery (39.7% vs. 19.1%, p=0.0003).

Conclusions: The MS is highly prevalent in young patients with AMI. Younger patients compared to older patients with AMI treated with PCI have higher triglyceride levels, less hypertension, are more likely to have single vessel CAD and present with a totally occluded vessel.

Long-term Safety and Efficacy of Drug-eluting Stents (DES) Versus Bare Metal Stents (BMS) in Public Health System Patients Stratified By Presentation Acuity at The Time of Percutaneous Coronary Intervention (PCI)

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Background: The main benefit of DES vs. BMS in PCI is reduced revascularization. Recent data also suggest reduced major adverse cardiac events (MACE) with DES used in the context of MI yet many patients (pts), especially the uninsured do not receive DES. We evaluated BMS vs. DES in a public health system (PHS) population with uniform access to healthcare and stratified by presentation acuity.

Methods: 2,000 pts undergoing PCI at a PHS hospital were analyzed as an open cohort. Pts were included if complete data were available and uniform access to healthcare was provided at the same PHS. Pts were analyzed by DES vs. BMS, stratified by stable vs. unstable (ACS, MI, shock) clinical presentation and followed for MACE (death, MI, urgent TVR).

Results: 1,702 pts (57.2 ± 10.2 yrs, 31.8% female, 45.9% AA, 22.5% White) underwent PCI for STEMI (19.2%), NSTEMI (28.0%), unstable angina (24.7%) or stable angina (18.9%). The majority (1,402, 82.4%) received BMS. Clinical follow-up was obtained in 85.1% of pts (n=1,702, mean 2.5± 1.9 yrs). MACE at 3 years was highest in unstable/BMS pts and lowest in stable/DES pts (Fig. 1). Notably the difference between DES and BMS in the unstable cohort was driven by mortality reduction.

Conclusion: DES reduces MACE and likely mortality advantage over BMS, especially in unstable pts. DES was utilized in the minority of pts in this cohort, likely reflecting a significant selection bias. Additional multivariate analyses are currently underway to evaluate the true magnitude and mechanisms of benefit.

Abbreviated Duration Eptifibatide In St Elevation Myocardial Infarction - Outcomes And Predictors Of Complications

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Background: Previous literature has demonstrated the safety of abbreviated GP IIbIIIa infusion in elective PCI. There is no data to date on the safety of abbreviated infusion of GP IIbIIIa inhibition in the setting of primary PCI for STEMI.

Methods and Results: A retrospective cohort of STEMI patients undergoing primary PCI from June 2009 - June 2011 was analyzed. Detailed demographic, intervention and complication data was collected. A logistic regression model was utilized to identify univariate and multivariate predictors of a pre-specified primary combined endpoint of death/vascular complication/transfusion/stent thrombosis. 66 patients with a mean age of 61 ± 13 years (27% female, 26% diabetic) were identified. Six patients had cardiogenic shock on admission (9%). Symptom onset to device time was 312±318 min and lab to device time was 19±10 min. There were 6 patients (9%) with a pre lab cardiac arrest. Mean LVEF was 53±12 % and peak CK was 1991±2310U. Successful PCI (TIMI 3 flow and residual stenosis ≤ 20%) was achieved in 64 (97%). Thrombectomy was performed in 45 (68%) patients. Stents were deployed in 65 (98%) with 1.6±0.5 stents (mean length 31±19 mm) delivered to a mean of 1.1±0.4 lesions. Mean duration of...