clinical characteristics and outcome for patients undergoing small versus large culprit vessel PCI in our unit.

Methods: We included all patients who underwent PCI in our unit between Sept 2009 and May 2011. They were divided into two groups according to the size of the largest balloon or stent used in the culprit lesion. Of the remaining 1102 patients, 569 (51.6%) had small (≤3 mm) vessel PCI and 533 (48.4%) had large (>3 mm) vessel PCI. Patients with small vessel PCI were significantly older, more likely to be female and have anterior STEMI with less use of thrombolytic therapy, and with significantly higher drug eluting stent (DES) usage. There was significantly higher in-hospital mortality (3.3% vs 2.8%, OR 1.24, 95% CI 1.10-1.96, p = 0.01) compared with large vessel PCI. On binary logistic regression analysis of small vessel PCI patients (covariates used: female sex, Age >75 yrs, cardiogenic shock, diabetes, LAP PCI and DES use), the positive predictors of 30-day mortality were age >75 yrs (OR 1.9, 95% CI 1.1-3.6, p = 0.009) and cardiogenic shock (OR 9.9, 95% CI 4.3-22.6, p <0.001) with DES use (OR 0.4, 95% CI 0.2-0.8, p = 0.01) being the only negative predictor of mortality.

Between 01/05 and 11/07 1001 patients were teated conservatively. Mean survival for conservatively treated NSTEMI patients was 706 ± 1102 days while for those undergoing PCI it was 789 ± 533 days (p = 0.001). As predictors of long-term mortality we identified renal failure (p = 0.001) and cardiogenic shock (p = 0.001) being the only negative predictor of mortality.

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Conclusions: In this large consecutive PCI series from a single center, small culprit vessel size was associated with significantly higher 30-day mortality, more than double the mortality seen in patients with a large culprit vessel.

TCT-503

Predictors of long-time survival in acute myocardial infarction in elderly patients

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Background: Elderly constitute an increasing proportion of all patients, who are admitted for ACS to the hospital, but on the other hand increased age has been identified as an important risk factor for death or recurrent MI in this subset. Furthermore elderly patients are at higher risk for complications with interventional procedures, therefore the overall benefit in such procedures, facing a limited life expectancy in elderly patients anyway, still remains uncertain. The purpose of this study was to identify predictors of long-time survival in either interventionaly or conservatively treated elderly patients with ACS in a large consecutive series of elderly (>75 years).

Methods: Between 01/05 and 11/07 1001 patients >75 yrs. were admitted with the diagnosis of ACS in our hospital. Records were evaluated and patients were identified on the basis of their discharge diagnosis. Adverse outcome, defined as the appearance of death, myocardial infarction, complicated hospital stay, pneumonia and interventional complications like bleeding, stroke and reinfarction etc. was evaluated. Using a multi-variate regression analysis, factors which predicted long-time mortality were identified.

Results: Of 1001 patients (mean age 75.1 ± 2.4 yrs, female 551 (55.1%) males), Killip-class I,42.0,75.7 EF 47 ± 1.75% 77.5% were treated invasively; whereas 247 (22.5%) were treated conservatively. Mean survival for conservatively treated NSTEMI patients was 789 ± 533 vs 1237 ± 299 in the invasively treated patients, in the STEMI group survival was 706 ± 128 for conservatively and 1238 ± 54 days for interventionaly treated patients respectively (p = 0.001). As predictors of long-term mortality we identified renal failure (p = 0.001), insulin-treated Diabetes (p = 0.001), chronic obstructive pulmonary disease (p = 0.002), Grace-Score (p = 0.002) intervention (p = 0.003), increased body mass index (p = 0.018) and age (p = 0.042).

Conclusions: In our large data base of 1001 patients age was not the main predictor of long-time mortality. Therefore advanced age should not be the main factor in decision making for conservative or invasive treatment in elderly patients with ACS and an invasive strategy should be offered also to elderly patients.

TCT-504

Long Term Outcomes Among Patients With 'False-positive' STEMI Activations: A Report From The ACTIVATE-SF Registry

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Background: An emphasis on sensitivity in the diagnosis of ST-segment elevation myocardial infarction necessitates a certain degree of 'false positive' diagnoses. Little is known about the long-term outcomes of those ultimately found to lack a culprit coronary artery occlusion despite a putative STEMI diagnosis.

Methods: We analyzed a registry of all STEMI diagnoses established in the Emergency Department (ED) at two urban centers from 2008 to 2011. Subsequent death, ED visits, hospitalization, and cardiac procedures at our study centers following index hospitalization were evaluated. Statistical analyses were performed using Student’s t tests and regression analyses.

Results: During a median follow up of 20 months (IQR = 12.2-29.6 months), 13 of 153 patients with STEMI diagnoses died as compared to 32 of 248 ‘true positives’ (p = 0.001) (Figure 1). After adjusting for traditional risk factors, all-cause mortality was not statistically different between ‘true’ and ‘false’ STEMI diagnoses (AOR 2.26, 95% CI 0.21-24.23, p = 0.499). However, false positive status was associated with a significantly higher likelihood of a recurrent visit to the emergency department (AOR 2.73, 95% CI 1.24-6.02, p = 0.01), and an increased rate of re-hospitalization (1.04 additional hospitalizations, 95% CI 0.21-1.86, p = 0.011) although they showed a trend towards fewer subsequent myocardial infarctions (AOR 0.92, 95% CI 0.17 to 0.01, p = 0.07). Conclusions: Patients with ‘false positive’ STEMI diagnoses have rates of long term all-cause mortality comparable to a ‘true’ STEMI population and have potentially greater rates of recurrent resource utilization. Patients diagnosed with a putative STEMI but found to lack a culprit coronary artery occlusion on angiography remain at great risk for subsequent events and require further study.

TCT-505

Prognostic Impact of Anaemia In Patients With ST Elevation Myocardial Infarction Treated By Primary PCI

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Background: The aim of this study was to investigate the effects of baseline anaemia on the outcome of patients treated by primary percutaneous intervention (PCI) for ST elevation myocardial infarction (STEMI).

Methods: We undertook a retrospective cohort study of 2418 STEMI patients treated with PCI between January 2004 and August 2010 at a single centre. We investigated the outcome of patients with anaemia compared to patients with a normal haemoglobin level. Anaemia was defined according to the WHO definition of haemoglobin (Hb) less than 12 g/dL for females and 13 g/dL for males. We also calculated hazard ratios (HRs) using a stratified model according to haemoglobin level.

Results: 471 (19%) patients were anaemic at presentation. The anaemic cohort were older (72.2 vs. 64.2, p < 0.0001), had higher incidence of diabetes (28% vs. 16%, p = 0.0001), hypertension (57% vs. 43%, p = 0.001), hypercholesterolaemia (48% vs. 30%, p = 0.007), previous PCI (15% vs. 9%, p < 0.0001), previous MI (23% vs. 12%, p = 0.002) and cardiogenic shock (12% vs. 5%, p < 0.0001). Over a mean follow-up period of 3 years there was significantly higher all cause mortality in the anaemic group compared to the normal Hb group (20.4% vs. 13.5%, p < 0.0001). However, after adjustment for all variables using multivariate analysis, anaemia (based on the WHO definitions) was not an independent predictor of mortality or major adverse cardiac events (MACE) over the follow-up period. However, when we used a stratified model by g/dL, we found that in men there was an increased risk of adverse outcome with low Hb. There appeared to be a threshold value of haemoglobin (13 g/dL) associated with increased risk. Although a similar trend was observed for women no significant difference was observed.

Conclusions: Patients with anaemia undergoing primary PCI are at higher risk of an adverse outcome. Anaemia is a simple and powerful marker of poor prognosis. Although after multivariate analysis, anaemia (based on WHO definitions) does not appear to be an independent predictor of all-cause mortality or MACE after primary PCI, in men there appears to be a threshold value of Hb, below which there is an associated increased risk.

TCT-506

Out-Of-Hours Outcomes in STEMI Patients Treated With Primary Percutaneous Coronary Intervention

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Background: The aim of our study was to determine the short and long-term outcomes between patients undergoing PCI during ‘normal hours’ (i.e. In-hours) versus ‘out-of-hours’. Our primary end point was mortality with a follow-up upto five years.

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