

culprit lesions (60 vs. 40%,  $p < 0.001$ ). No differences were observed for mortality with respect to either culprit vessel (log-rank- $p$ -value=0.54) or proximal vs. mid/distal location of the culprit lesion within the vessel (log-rank- $p$ -value=0.45). This was also true after multivariable adjustment, independent predictors of outcome were serum lactate, success of revascularization, age, serum creatinine, prior stroke, known peripheral artery disease and left bundle branch block in admission electrocardiogram.

**CONCLUSIONS** For patients with CS complicating myocardial infarction, the culprit lesion localization seems to be unrelated with mortality.

**CATEGORIES CORONARY:** Acute Myocardial Infarction

**KEYWORDS** Cardiac shock, Culprit Vessel, Outcomes

#### TCT-231

##### Exenatide Does Not Improve Myocardial Salvage In Patients With An Acute Myocardial Infarction Successfully Treated With Primary Percutaneous Coronary Intervention: The First Results Of The EXAMI Trial

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**BACKGROUND** The Glucagon Like Peptide 1 receptor agonist exenatide is an incretin based compound used for glycemic control in patients with type 2 diabetes mellitus (DM) and has previously been demonstrated to have cardioprotective properties. This double blinded, randomized clinical trial studies the effect of exenatide treatment on myocardial salvage in ST Elevated Myocardial Infarction (STEMI) patients who successfully underwent primary Percutaneous Coronary Intervention (PCI).

**METHODS** STEMI patients were randomly assigned to either intravenous exenatide or placebo. Study medication was started prior to PCI using 10 µg/h for 30 minutes followed by 0.84 µg/h for 72h. Patients with a previous STEMI, Thrombolysis In Myocardial Infarction flow 2 of 3, multi vessel disease, or DM were excluded. Magnetic resonance imaging was performed within 2-7 days after PCI, to determine left ventricular (LV) volumes and ejection fraction (EF), infarct size and area at risk (using T2-weighted hyperintensity (T2W) and late enhancement endocardial surface area (ESA)). The primary endpoint of myocardial salvage index (MSI) was defined as the difference between the area at risk and total infarct size, as ratio of the area at risk. Secondary endpoints were major cardiovascular events ((MACE) defined as cardiac death, repeat STEMI, coronary artery bypass grafting or repeat PCI), LV end systolic volume (ESV), LV EF and infarct size.

**RESULTS** In total 91 patients (age 57.4 ± 10.1 years, 76% male) completed the study. There were no baseline differences between both groups. Symptom to balloon time was 181±85 vs. 201±95 min ( $p=0.24$ ) for exenatide ( $n=42$ ) and placebo ( $n=49$ ) respectively. Patients receiving exenatide had significantly more episodes of nausea early after study drug initiation (16 vs 4 patients,  $p < 0.001$ ), but this did not lead to study discontinuation and was treated successfully with metoclopramide in all cases. The MSI was not significantly different between both groups (with ESA 0.30 ± 0.26 vs 0.26 ± 0.22,  $p=0.43$  and with T2W 0.35 ± 0.25 vs 0.33 ± 0.22,  $p=0.65$  for exenatide vs placebo respectively). There were also no differences in LV ESV (61.3 ± 26.0 vs 54.9 ± 25.9 ml/m<sup>2</sup>,  $p=0.259$ ), LV EF (52.6 ± 7.7 vs. 52.4 ± 6.9%,  $p=0.53$ ) and infarct size (18.8 ± 13.2 vs. 18.8 ± 11.3% of LV mass,  $p=0.965$ ). No MACE occurred during the in-hospital phase.

**CONCLUSIONS** Our exenatide treatment protocol does not improve myocardial salvage in STEMI patients successfully treated with primary PCI. This is incongruent with previous clinical trial results. Differences in the exenatide treatment protocols are the most obvious reason for the ambiguous trial results. Further studies are needed to establish the exact role and the optimal treatment protocol of exenatide in this group of patients.

**CATEGORIES CORONARY:** Acute Myocardial Infarction

#### TCT-232

##### Primary Percutaneous Coronary Intervention In Nonagenarian Patients With ST Elevation Myocardial Infarction: In-Hospital Mortality And Outcomes At One Year Follow-Up

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**BACKGROUND** Limited information is available about the efficacy and outcomes after primary percutaneous coronary intervention (P-PCI) in very elderly patients (pts) with ST Elevation Myocardial Infarction (STEMI).

**METHODS** 23 nonagenarian pts were treated (1% of the total STEMI population underwent P-PCI). We evaluated in-hospital, 6-months and 1 year-mortality in a retrospective analysis of nonagenarian pts admitted at our Department with STEMI and treated with P-PCI from November 2004 and December 2013. A bivariate analysis was carried on with exact Fisher's test, identifying those variables associated with mortality. Odds ratios (ORs) from univariate logistic regression analyses were performed.

**RESULTS** All pts received aspirin and 300 mg clopidogrel loading dose. Mean age: 91.2 yrs (range 90-96). 65% was women. Mean left ventricular ejection fraction (LVEF) at the admission: 38.9% (23% of pts with LVEF < 35%). Advanced Killip class (3-4) at presentation: 10 pts (43%). Baseline characteristic: 13% of pts with prior revascularization, 17.3% prior stroke, 21.7% diabetes, 43% hypertension, 8.6% atrial fibrillation. No dementia (good mental status). Mean renal function evaluated by creatinine clearance measured by the Cockcroft-Gault equation: 38.7 mL/min (range 16.8 - 72.9). Mean hemoglobin value: 13.7 gr/dL. Mean number of vessels treated per pts: 1.04, showing a strategy of treating the culprit vessel only. 3 left main (LM), 8 left anterior descending coronary artery (LAD), 4 circumflex coronary artery, 8 right coronary artery (RCA). The radial approach was performed in 65% (100% of cases from 2012). The proportion of radial to femoral shift was 6%. An average of 1.26 stents per pt were implanted (100% were bare metal stent). In 4 pts we performed P-PCI without stent. No Glycoprotein IIb/IIIa were used. Intra-aortic balloon pump was implanted in 1 pt. The TIMI flow 2-3 post P-PCI was achieved in 78.2% of pts (angiographic success was achieved in 20/23 pts). In 1 pt occurred acute renal failure post P-PCI and in 1 pt occurred major bleeding; no stroke. The overall in-hospital mortality rate was 34.7% (one pt died during the procedure). Cumulative mortality after discharge at 6 months was 14% and at 1 year was 28%. LVEF < 30 showed a higher risk of in-hospital mortality and cumulative mortality at 6 months. Killip ≥ 3 showed a higher risk of in-hospital mortality. LM and LAD showed a higher risk of in-hospital mortality, cumulative mortality at 6 months and at 1 year.

**CONCLUSIONS** Our data suggest that primary P-PCI in nonagenarian pts can be performed with an acceptable bleeding risk. The in-hospital mortality is significant but the cumulative mortality at 6 months and 1 year is low, showed a good success rate of the P-PCI strategy. The radial approach is feasible and safe. The invasive strategy in selected very elderly population should be offered. Further studies are needed to evaluate the benefit of P-PCI versus non P-PCI strategy in the very elderly population.

**CATEGORIES CORONARY:** Acute Myocardial Infarction

**KEYWORDS** Elderly, Primary percutaneous coronary intervention, Radial

#### TCT-233

##### Prognostic value of left ventricular global function index in patients after ST-segment elevation myocardial infarction

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**BACKGROUND** The left ventricular global function index (LVGFI) is a novel indicator of left ventricular performance. Its prognostic value in patients after ST-segment elevation myocardial infarction (STEMI) is unknown. We sought to evaluate the prognostic value of LVGFI measured by cardiovascular magnetic resonance (CMR) imaging after STEMI.

**METHODS** Two hundred eligible STEMI patients (56±11 years, 16 % female) revascularized by primary percutaneous coronary intervention (PCI) were followed-up for 3.1 [2-4.1] years for major adverse cardiac events (MACE). MACE was defined as a composite of death, nonfatal myocardial re-infarction and new congestive heart failure. All patients underwent CMR imaging within 2 [2-4] days after STEMI. Late enhancement and cine images were acquired to assess myocardial injury as well as myocardial function, including LVGFI.

**RESULTS** Patients suffering a MACE event ( $n = 20$ , 10%) had a significantly lower LVGFI ( $p = 0.001$ ). In Kaplan-Meier analysis, a