Objectives: In non ST elevation acute coronary syndromes (NSTEACS) admitted within 48h of symptom onset, we aimed to determine in-hospital and 30-days mortality, and proportion of patients alive at 31 days to 6 months (T1) and 31 days to 12 months follow-up (T2). Cumulative rate of composite outcome (CO) of death/nonfatal MI/unstable angina was also analysed at 30 days, 6 and 12 months.
Methods: A retrospective review of 453 consecutive patients > 75 yrs discharged after NSTEACS at a single ICCU between 2006 and 2010 was conducted. IS (n=301) or conservative strategy (CS) (n=152) were chosen as per medical judgment. Multivariate regression models to test the association between strategy and outcomes were used and a sensitivity analysis performed. Variables introduced into the models were age, gender, admission creatinine clearance, ejection fraction, haemoglobin and Killip classes, admission heart rate, blood pressure and cardiac arrest, ST deviation, peak troponin level, time from admission to percutaneous coronary intervenion (PCI), albumin serum levels.
Results: Inhospital, 8 (2.7%) and 14 (9.2%), at 30 days, 11 (3,7%) and 21 (13,8%), at T1 28 (9,3%) and 44 (29,0%), and at T2 40 (13,3%) and 57 (37.5%), patients died in the IS and CS group respectively. At 30 days 25 (8,3%) and 24 (15,8%), at T1 52 (17,3%) and 56 (36,8%), and at T2 74 (24,6%) and 64 (42.1%), patients achieved the cumulative CO in the IS and CS group respectively. IS sizeably decreased adjusted in-hospital (OR 0.37, 95% CI 0.13-1.04, p=0.0603), 30-days (OR 0.28, 95% CI 0.12-0.67, p=0.004), T1 (T1 OR 0.33, 95% CI 0.16-0.67, p=0.0025) and T2 mortality (T2 OR 0.34, 95% CI 0.20-0.58, p=0.0001). IS correspondingly lowered cumulative rate of CO at 30 days (OR 0.55, 95% CI 0.28-1.07, p = 0.077), 6 months (OR 0.52, 95% CI 0.34-0.81, p = 0.003) and 12 months (OR 0.68, 95% CI 0.46-0.98, p = 0.0041). Further independent predictors of prognosis were also hemodynamic status (Killip class II-IV), or cardiac arrest at admission.
Conclusions: IS was independently associated with a three-fold lower mortality and twofold lower CO in this high risk population at either brief, mid or long-term.

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ABSTRACT WITHDRAWN

P424 | BEDSIDE
One-hour rule-out and rule-in of acute myocardial infarction using Siemens high-sensitivity cardiac troponin T

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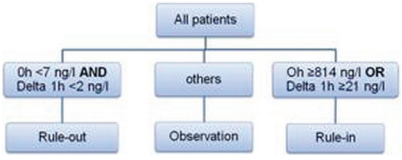
Background: High-sensitivity cardiac troponin (hs-cTn) assays seem to improve the early diagnosis of acute myocardial infarction (AMI), but it is unknown how to best use them in clinical practice. Our objective was to develop an algorithm for rapid rule-out and rule-in of AMI.
Methods: A prospective multicenter study enrolling 946 unselected patients with acute chest pain presenting to the ED. Siemens high-sensitivity cardiac troponin I (hs-cTnI) was measured in a blinded fashion at presentation and after 1 hour. The final diagnosis was adjudicated by 2 independent cardiologists. A hs-cTnI algorithm incorporating baseline values as well as absolute changes within the first hour was derived from all patients. The primary prognostic end point was death during 30 days of follow-up.
Results: AMI was the final diagnosis in 18% of patients. According to our rule-in and rule-out algorithm (figure 1), 469 patients (50%) could be classified as "rule-out", 172 patients (18%) as "rule-in", and 305 patients (32%) as in the "observational zone" within 1 hour. Overall, this resulted in a sensitivity and negative predictive value of 97% and 99% for rule-out, a specificity and positive predictive value of 95% and 76%, respectively, for rule-in, and a prevalence of AMI of 10% in the observational zone group. Cumulative 30-day survival was 99.6%, 99.0%, and 95.3% (P<.001) in patients classified as ruleout, observational zone, and rule-in, respectively.



Conclusions: Using a simple algorithm incorporating hs-cTnI baseline values and absolute changes within the first hour allowed a safe rule-out as well as an accurate rule-in of AMI within 1 hour in 68% of unselected patients with acute chest pain. This novel strategy may obviate the need for prolonged monitoring and serial blood sampling in 2 of 3 patients.

P425 | BEDSIDE
Optimal cutoff-value of Siemens cardiac troponin I assay in patients with kidney disease for the early diagnosis of acute myocardial infarction

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Purpose: The recent introduction of more sensitive cardiac troponin (cTn) assays improved the early diagnosis of acute myocardial infarction (AMI). However, its diagnostic utility has never been tested in patients with kidney disease (KD), who are known to have elevated levels of cTn already in the absence of AMI, which may lead to a lower diagnostic value of more sensitive cTn in this high-risk subgroup.
Methods: We conducted an international multicenter study to examine the diagnostic accuracy of the Siemens cTnI Ultra assay in 1997 consecutive patients presenting to the emergency department with symptoms suggestive of AMI, of whom 343 (17%) were determined to have KD (MDRD GFR <60ml/min/1.73m^2) and to derive the optimal cutoff-value for the diagnosis of AMI in patients with KD. The diagnostic accuracy was further compared to a conventional cTn assay (Roche Troponin T fourth generation). The final diagnosis was adjudicated by two independent cardiologists based on hs-cTnT.
Results: AMI was the final diagnosis in 35% (n=120) of all KD-patients as compared to 18% in patients with normal kidney function (p<0.001). Among KD-patients with other diagnoses than AMI, baseline hs-cTnI-levels were elevated above the 99thpercentile in 20%, In patients with KD the diagnostic accuracy at presentation, quantified by the area under the receiver-operator-characteristic curve (AUC), was significantly greater for Siemens cTnI as compared to the standard cTnT assay (AUC for cTnI, 0.88 vs. AUC for the standard assay, 0.82, p=0.013). In patients presenting within three hours after the onset of chest pain, the superiority of Siemens cTnI over conventional cTnT was even more pronounced (AUC 0.86 vs. 0.72, p=0.005). In KD, the optimal hs-cTnI cutoff derived from the ROC curve was 46 ng/l compared to 19 ng/l in patients with normal kidney function (standard 99th percentile 40 ng/l, provided by the manufacturer).
Conclusions: The Siemens cTnI Ultra assay has a very high diagnostic accuracy also in KD-patients and is superior to a conventional cTnT-assay. Mild cTnI elevations are common in non-AMI patients. The optimal cutoff-level in KD-patients seems to be around the 99th percentile of a standard population, whereas the optimal cutoff-level in patients with normal kidney function tends to be only half of the suggested cutoff-value.
ClinicalTrials.gov number, NCT00470587.

P426 | BEDSIDE
Chronic kidney disease epidemiology collaboration equations and global registry for acute coronary events risk score for the prediction of mortality in non-ST elevation acute coronary syndromes

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Aims: The CKD-EPI equations are newly developed formulas for estimate glomerular filtration rate (GFR) that are more accurate than MDRD equation. The