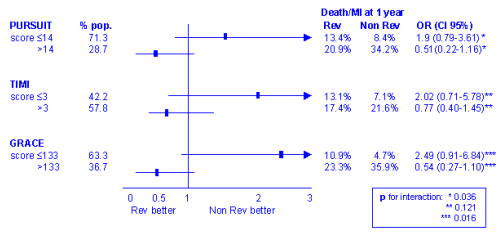
MI at 1 year was obtained by the GRACE RS but the performance of the PURSUIT and TIMI RS was good. We found a statistically significant interaction between the risk stratified by the best cut-off value for the GRACE and PURSUIT RS and myocardial revascularization, with a prognostic benefit for the higher risk patients.
Conclusions: The risk scores studied demonstrated a good predictive accuracy for D or MI at 1 year and allowed the identification of high risk subsets of patients that most benefit from myocardial revascularization performed during the initial hospital stay.



1098-78 Low Hemoglobin Predicts Worse Clinical Outcomes in Acute Coronary Syndromes

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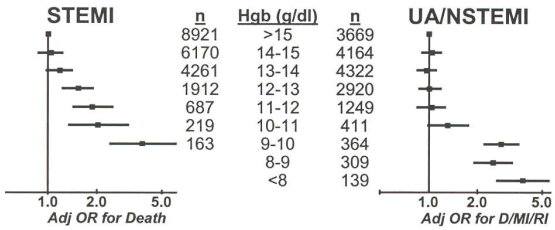
Background: In acute coronary syndromes (ACS), anemia has the potential to worsen myocardial ischemia by further compromising oxygen delivery. We sought to determine the impact of anemia on clinical outcomes in a broad cohort of patients with ACS.
Methods: Data from 22,333 patients with STEMI and 17,547 patients with UA/NSTEMI from the pooled TIMI trial databases were analyzed. Baseline hemoglobin (Hgb) levels were categorized in 1 g/dl increments. Multivariable logistic regression was used to adjust for age, sex, hypertension, diabetes, smoking, renal insufficiency, prior MI, prior CHF, prior ASA, prior CABG, and index revascularization.
Results: Lower baseline Hgb levels were associated with greater evidence of acute myocardial injury in both STEMI (higher rates of Killip class II-IV and LBBB, p<0.001 for each) and UA/NSTEMI (higher rates of ST deviation and higher peak troponin, p<0.001 for each). In STEMI, patients with lower baseline Hgb levels had higher mortality at 30 days (p<0.001) and in UA/NSTEMI they had higher rates of death, MI, or recurrent ischemia (p<0.001). These associations remained significant even after adjusting for potential confounders and the adjusted odds ratios and 95% confidence intervals are presented in the Figure.
Conclusion: Low Hgb on admission is independently associated with worse outcomes in patients with ACS. These findings suggest that efforts to raise Hgb may be beneficial in this setting.



1098-79 Renal Function Predicts Outcomes in Acute Coronary Syndromes: Insights From the CURE Trial

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Background: Chronic renal insufficiency (CRI) is associated with increased mortality in coronary artery disease. The aim of this study was to assess the relationship between various degree of renal insufficiency and prognosis in patients (pts) with acute coronary syndromes (ACS) Additionally we assessed if benefit of clopidogrel treatment is modified in pts with CRI.
Methods: In the CURE trial 12.253 patients (97.5 %) had a baseline serum creatinine measurement at enrollment. From this measurement the glomerular filtration rate (GFR) was estimated using the MDRD equation, and the outcomes of patients with and without CRI were compared.
Results: 3262 patients (26.2 %) had a GFR ≤ 60 ml/min, corresponding to at least moderate CRI. Patients with CRI were significantly older (70.3 ±9.5, versus 62.0 ±11.0). Among patients with CRI there were more females (53.8, versus 32.8 % in the group without CRI), and significantly more hypertensives (70, versus 54.9 %), diabetics (29, versus 20.3 %) and more patients with previous myocardial infarction (39.8, versus 29.5 %). Major vascular events (cardiovascular death/myocardial infarction/stroke) occured more frequently in patients with CRI (GFR>60 - 8.6 %; GFR 30.1-60 - 14.4 %;GFR 0-30 25.5 %). A significant gradient was present in all secondary outcome measures relative to GFR. The beneficial effect of adding clopidogrel to standard treatment of ACS was similar and statistically significant in pts below and above the median value of GFR, with no evidence of statistical heterogeneity (RR 0.83; 95 % CI:0.72-0.95, versus 0.73; 95 % CI: 0.61-0.87). The risk of major/life-threatening bleeding was increased in patients with CRI in the CURE trial population (2.1 versus 1.0 %), this risk only moderately increased by adding clopidogrel, and the hazard ratio was similar in patients with CRI (HR 1.5 + 1.16 - 1.92) and without CRI (HR 1.14± 0.83 - 1.59).
Conclusion: CRI carries a poor prognosis in pts with non ST elevation ACS. Adding clopidogrel to standard treatment of ACS was safe and resulted in a decreased incidence of major cardiovascular outcomes in patients with and without CRI .

1098-80 High-Normal Creatinine: An Underappreciated Predictor of Poor Outcomes in Chest Pain Patients

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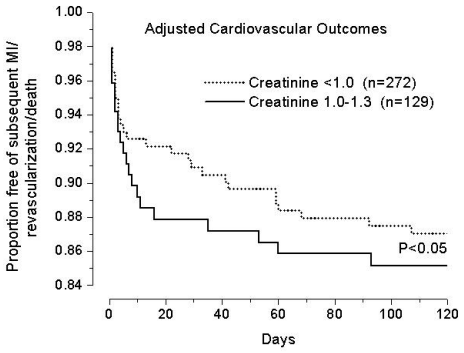
Background: Patients with renal insufficiency have poor outcomes following acute myocardial infarction (MI) or unstable angina. However, little investigation has focused on the impact of high-normal creatinine on clinical outcomes.
Methods: We prospectively followed 459 patients with ongoing chest pain admitted to the hospital with suspected myocardial ischemia. Patients with elevated creatinine (>=1.4 mg/dL, n=58) were excluded.
Results: Patients with high-normal creatinine (1.0-1.3 mg/dL, n=129), compared to those with low-normal creatinine (<1.0 mg/dL, n=272), tended to be male (66% v. 36%), hypertensive (66% v. 52%), and older (62 +/-16 v. 55 +/- 15 yrs (mean+/-SD)) (all p<0.05), but the rates of diabetes mellitus (24% v. 20%), high cholesterol (36% v. 44%), and MI at presentation (16% v. 10%) were similar (all p=NS). Among patients with high-normal creatinine, 22% (unadjusted) suffered a subsequent MI, revascularization, or death by 120 days. This compares to 13% in patients with low-normal creatinine (p<0.05). The Kaplan-Meier curve, adjusted for baseline differences between the two groups, confirmed a higher rate of subsequent MI, revascularization, or death in the high-normal creatinine group as compared to the low-normal creatinine group, mainly attributable to an increase in early events (p<0.05).
Conclusion: These data identify high-normal creatinine as an independent, albeit underappreciated, risk factor for poor outcomes in patients with suspected myocardial ischemia.



1098-81 Which White Blood Cell Compartments Predict Increased Cardiovascular Risk?

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Background: Epidemiological observations have associated an elevated white blood cell (WBC) count with the development of cardiovascular disease, but which leukocyte compartments carry this risk is uncertain.
Methods: Patients entered into the Intermountain Heart Collaborative Study Registry between 1994–2001 who had angiographic assessment of coronary artery disease (CAD), a baseline total and differential WBC count, and long-term follow-up for death or nonfatal myocardial infarction (MI) were studied. Patients (pt) with acute MI were excluded from primary analyses. The predictive value for D/MI of total WBC, neutrophil (N), lymphocyte (L), monocyte (M) counts, and N/L ratio was assessed using Cox regressions.
Results: 3227 pt were studied. Mean age was 64; 62% were male; 53%, hypertensive; 45%, hyperlipidemic; 17%, smokers; 20%, diabetic. Time to event (N=478, 14.8%) or last follow-up averaged 3.5 years. WBC total and compartment counts were non-normally distributed. In univariate analysis, an increased hazard (HR) ratio was associated with fourth (vs. first) quartile (Q) total WBC (1.4, p<0.01), N (2.0, p<0.001), L (0.41, p<0.001), M (1.4, p<0.01), and N/L (2.7, p<<0.001) counts. In multivariable modeling (backward conditional stepwise regression), entering standard risk factors, presentation, and CAD severity, WBC (HR 1.4, p=0.01) and M (HR 1.3, p<0.02) were weaker and N (HR 1.8, p<0.001), L (HR 0.51, p<0.001), and N/L (HR 2.2, p<0.001) were stronger independent predictors of death/MI. When WBC variables were entered together, N/L was retained as an independent predictor (HR 2.2, CI 1.7-2.9, p<<0.001), together with age, diabetes, presentation, CAD severity, family history, and M (model chi-square 190). Risk associations persisted in analyses restricted to CAD pt or including acute MI pt.
Conclusions: Total WBC count is confirmed to be an independent predictor of D/MI in