POSTER SESSION

1145 Clinical Prognostic Factors in Acute Coronary Syndromes

Tuesday, March 19, 2002, 9:00 a.m.-11:00 a.m.
Georgia World Congress Center, Hall G
Presentation Hour: 10:00 a.m.-11:00 a.m.

1145-27 Is There Still a Role for Physician Assessment in the Emergency Department in the Era of Novel Cardiac Markers?

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Elevated serum levels troponin I (TnI), myosin light chain (MLC), and myoglobin (Mb) predict short term cardiac ischemic events in patients presenting to the Emergency Department (ED) with chest pain. The additive value of such markers with clinical assessment has not been assessed. In order to determine the additive predictive value of markers of myocardial injury with clinician judgement in predicting early ischemic events in patients presenting to the ED, we prospectively studied 247 patients presenting to 2 EDs within 24 hours of the onset of symptoms consistent with an acute coronary artery syndrome. After initial assessment, physicians estimated the probability of a major adverse cardiac event (MACE), consisting of death, myocardial infarction or ischemia driven revascularization within the initial week based on their initial history, physical examination and electrocardiogram (ECG). Serum samples were obtained for TnI, MLC, and Mb at presentation and in 4 hours. Physician decisions were made without the knowledge of the cardiac marker results. Mean age of the patient population was 52 ± 13 years and 54% of subjects were male. During follow-up, 1% died, 13% suffered an acute myocardial infarction, and 15% underwent coronary revascularization. Factors shown to predict events included ST-elevation (p<0.0001), QRS >120 msec (p=0.005), serial ECG changes (p=0.02), pathologic q-waves (p=0.05), an elevated serial TnI (p=0.006) or serial MLC level (p=0.008) and the physician estimate of increased risk (p<0.0001). In the multivariable analysis, only ST segment elevation at presentation, a QRS duration >120 msec, an elevated MLC and physician prediction of likelihood of cardiac events were independent predictors of MACE. A decision rule based solely on physician estimated probability of MACE and ECG findings had 96% sensitivity and 33% specificity for predicting MACE and was not improved by the addition of marker data. Although new cardiac markers of myocardial damage provide important information on short-term outcome, physician assessment still remains the most important predictor. Hence, use of cardiac markers should only be used in conjunction with physician assessment of cardiac risk.

1145-28 Validation of a Simple Electrocardiographic Criterion for Early Risk Assessment in Patients With Non-ST Segment Elevation Acute Myocardial Infarction

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Background: The prognostic significance of the location of ST segment depression in patients with non-ST elevation acute myocardial infarction (AMI) is controversial. We aimed to confirm the previous observation that ≥0.1 mV ST segment depression in ≥2 of the lateral leads I, aVL, V_5 and V_6 (STD_L) predicts a worse in-hospital outcome.
Methods: We analyzed 343 consecutive patients admitted to our center between 1996 and 1999 with a first AMI without Q waves or ≥0.1 mV ST segment elevation on admission.
Results: STD_L was the only variable from the initial ECG that was related to death after adjusting for baseline predictors (odds ratio: 5.3, 95% CI: 1.4 to 20.9, P<0.01), and was consistently associated with other adverse events:

Event rate (%)	No STD (n=147)	STD, non-lateral (n=82)	STD_L (n=114)
Death	1.4	1.2	14.9
Reinfarction	0.7	1.2	11.4
Angina with ST changes	10.2	9.8	29.8
Severe heart failure	2.0	3.7	32.5

Patients with STD_L had a similar CK-MB peak than the rest (116±12 vs. 134±10 mcg/l, respectively, P=NS). However, among the 176 patients that were catheterized before discharge, those with STD_L had lower left ventricular ejection fraction (61±2 vs. 68±1%, P=0.01) and more frequent left main or three-vessel disease than did the remaining patients (56 vs. 23%, P<0.001). Percutaneous intervention was carried out in 24 and 23% of patients with and without STD_L (P=NS), and surgical revascularization was indicated in 20 and 7%, respectively (P=0.001).
Conclusion: In patients with a first non-ST segment elevation acute MI, STD_L on admission is a simple and efficient criterion for early risk assessment, and its presence is related to extensive coronary artery disease.

1145-29 Value of Continuous Risk Stratification Early After Admission in Non-ST-Segment Elevation Acute Coronary Syndromes

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Background: Patients (P) with non-ST-segment elevation acute coronary syndromes (ACS) present a wide range of risk of death (D) or (re)-infarction (MI). As a great number of these events occur soon during evolution, early risk stratification is imperative. Nevertheless, after risk stratification at admission, the majority of P fall within a wide grey zone of intermediate risk. We sought to identify clinical variables and diagnostic methods predictive of D/MI at 30 days, in P classified initially as intermediate risk according to the TIMI Risk Score.
Methods: We studied 254 consecutive P with ACS. TIMI Risk Score was calculated on admission, and the sub-groups of P with high and intermediate risk of D/MI at 30 days were identified using the best cut-offs for the Score. In the sub-group of intermediate risk, we evaluated the prognostic value of clinical variables and diagnostic methods performed during the first 24 hours and not used in the TIMI Risk Score.
Results: The incidence of D/MI at 30 days was 9.8%. A TIMI Risk Score of 6 or 7 (19 P, 31.6% D/MI) or Score 5 (47 P, 14.9% D/MI) identified only a small group of P at high risk for D/MI (p=0.004). The remaining 188 P were classified as intermediate risk: Score 4 (76 P , 7.9% D/MI), Score 3 (62 P, 4.8% D/MI), Score 2 (35 P, 5.7% D/MI) and Score 0 or 1 (15 P, 6.7% of D/MI). The presence in the first 24 hours, of signs of heart failure (p=0.001), ST-segment shifts > 0.1mV detected by continuous ST-segment monitoring (p=0.002) or left ventricular ejection fraction (LVEF)<50% (p=0.012) were predictive of D/MI and identified 92% of these events. The absence of these findings was associated with the lowest risk (107 P, 0.9% D/MI) and the risk increased with the number of findings: 1 finding (53 P, 9.4% D/MI), 2 findings (24 P, 16.7% D/MI) and 3 findings (4 P, 50% D/MI).
Conclusion: Risk stratification at admission using the TIMI Risk Score identified only a small group of P at high risk for D/MI at 30 days. In the remaining P at intermediate risk, the presence of signs of heart failure, ST-segment shifts by continuous ST-segment monitoring or LVEF<50% identified the majority of those with D/MI.

1145-30 Abciximab Partially Attenuates Adverse Events Associated With Trombocytopenia: Analysis of GUSTO IV ACS

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Background: The development of thrombocytopenia (TCP) in patients with acute coronary syndromes (ACS) is associated with higher rates of major adverse clinical events (MACE) including death, MI and hemorrhage. Although the association between TCP and hemorrhage is apparent, the increased risk of MI and death in this group requires further study. The GUSTO IV - ACS trial was designed to assess the effects of abciximab on death or MI in non-ST segment elevation ACS patients without early intervention. There was no benefit with abciximab use and a trend toward increased MACE with longer infusion times in this setting. We hypothesized that prolonged infusions of abciximab might increase the occurrence of TCP and therefore lead to increased MACE.
Methods: We examined the occurrence of TCP (platelet count < 100 X 10^9/L and a 25% decrease from baseline) and its effect on MACE in the GUSTO IV - ACS patient population.
Results: The prevalence of TCP was 1.0 % in the placebo group, 4.7% in the 24 hour abciximab infusion group, and 7.0 % in the 48 hour abciximab infusion group (p= 0.001). The occurrence of adverse events in the three groups as a function of the presence or absence of TCP is tabulated below:

	PLACEBO			24 HR ABCIXIMAB			48 HR ABCIXIMAB		
	TCP (n=26)	NO TCP (n=2572)	p	TCP (n=121)	NO TCP (n=2469)	p	TCP (n=184)	NO TCP (n=2428)	p
Death or MI	26.9%	7.9%	0.003	10.7%	8.1%	0.306	12.5%	8.9%	0.110
Death, MI or Revasc.	53.8%	34.8%	0.061	33.1%	33.3%	1.000	35.9%	35.7%	1.000
Death	15.4%	3.8%	0.017	4.1%	3.4%	0.604	5.4%	4.2%	0.448
MI	19.2%	5.0%	0.009	6.6%	5.6%	0.548	9.2%	5.6%	0.050

Conclusion: TCP is associated with increased MACE in the placebo group, but this effect is blunted in the abciximab-treated groups. Although abciximab causes a higher rate of TCP, it also lessens the adverse events associated with TCP. The clinical significance and mechanism of these findings warrant further investigation.

1145-45 Underuse of Evidence-Based Medicine and Outcome of Acute Myocardial Infarction Patients With Renal Failure

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To evaluate the impact of renal failure upon management and outcome of MI patients we analyzed data of 1683 consecutive patients with acute MI admitted to 26 hospitals in Israel during a 2 month (2-3/2000) period. We compared clinical characteristics, management and outcome between 132 patients with renal failure (creatinine >1.3 mg/dl) vs. 1551 without (control) (Table). MI pts with CRF were more likely to die within 30d (OR=3.1 ; 95% CI 2.0-4.8). After adjustment for age and co-morbidities this association declined (OR=1.5; 95% CI 0.9-2.5). Adding thrombolysis and PCI into the statistical model did not affect the association between CRF and mortality. However, addition of