ABSTRACTS - Myocardial Ischemia and Infarction

Poster Session

1196 Therapies for Acute Coronary Syndromes

Tuesday, April 01, 2003, 3:00 p.m.-5:00 p.m.
McCormick Place, Hall A
Presentation Hour: 3:00 p.m.-4:00 p.m.

1196-105 Percutaneous Coronary Intervention During the Index Hospitalization is Associated With Reduced Recurrent Myocardial Infarction and Improved Survival Following Thrombolytic Administration

U. Michael Uhlhorn, Junarana Kainuma, Barbara A. Murphy, Christopher R. Lannon, Michael Giugliano, Elliott M. Antman, Eugene Braunwald, The TIMI Study Group, Brigham & Women's Hospital, Boston, MA

Background: Recurrent myocardial infarction (reMI) remains a limitation of fibrinolytic therapy. We hypothesized that following fibrinolytic administration, performance of percutaneous coronary intervention (PCI) during the index hospitalization is associated with lower rates of recurrent MI and death compared to conservative management. Methods: Performance of PCI thru hospital discharge and mortality up to 2 years were ascertained in the TIMI 4, 6A, 9B, 10B and 17 acute MI trials (n=20,043). Patients whose PCI followed a recurrent MI (n=266) were included in the medical therapy arm. Results: PCI following recurrent MI occurred less frequently in patients treated with PCI vs. patients without PCI (1.6% vs. 4.5%, p<0.001). Mortality was also lower in patients treated with PCI (p=0.0001; Figure). Similar results were seen across the low, intermediate, and high TIMI risk scores (Figure). Both PCI and recurrent MI remained associated with 2 year mortality in a model adjusting for age, anterior MI, pulse on admission, and gender (PCI hazard ratio=0.51, p<0.001; recurrent MI hazard ratio=1.95, p<0.001). Conclusion: Following thrombolytic administration, PCI during the index hospitalization was associated with a lower rate of in-hospital recurrent MI and improved 2 year survival.

Mortality to 2 Years by In-Hospital PCI, Stratified by TIMI Risk Score


1196-106 Reduction in Hospital Mortality by First Day Percutaneous Coronary Intervention for Non-ST Elevation Myocardial Infarction: Results of the ACOS-Registry

Angelik K. Gitt, Rudolf Schiele, Harm Wienenbergen, Stefan Schneider, Tobias Heier, Uwe Zeymer, Martin G. Goeth, Jochen Senges, ACOS-Study-Group, Herzzentrum Ludwigshafen, Ludwigshafen, Germany, Klinikum Nuernberg Sued, Nuernberg, Germany

Background: Current studies have reported a reduction in mortality by first day PCI in patients with acute coronary syndromes (ACS) without persistent ST-elevation. Data on outcome of high risk diabetics with non-ST-elevation myocardial infarction (NSTEMI) in clinical practice do not yet exist. Methods: Since June 2000 consecutive pts with ACS have been enrolled into the ACOS-Registry in 154 hospitals in Germany. We analysed the impact of first day PCI in diabetics with NSTEMI on hospital outcome. Results: Of 15124 consecutive patients with ACS, 4945 (41%) presented with NSTEMI, of whom 1567 (32%) were diabetics. First day PCI was performed in 1133 (16%) of patients with diabetes (OR 0.51; 0.35-0.74). After adjusting for differences in baseline characteristics and adjunctive therapy, first day PCI in diabetics with NSTEMI was associated with a 63% reduction of hospital mortality (OR 0.37; 0.18-0.75). Conclusion: Determinants for first day PCI in diabetics with NSTEMI were male gender, age < 70 years and prior PCI or CABG. First day PCI in acute NSTEMI was associated with a high 63% reduction of adjusted odds for hospital mortality.

Diabetics with first day PCI Diabetics without first day PCI


1196-107 Improved Functional Status and Quality of Life After Invasive Management of Non-ST-Segment Elevation Acute Myocardial Infarction

Mark J. Eisenberg, Flore F. Teng, Muhammad R. Chaudhry, Jose Ortiz, Louise Pilate, Jewish General Hospital/McGill University, Montreal, PQ, Canada

Background: While recent studies suggest that clinical outcomes may be improved by invasive management following non-ST-segment elevation acute myocardial infarction (AMI), it remains unclear whether functional status and quality of life (QOL) are affected by an invasive strategy. Methods: We randomized 63 patients to invasive vs. non-invasive management following non-ST-segment elevation AMI. Functional status was assessed using maximal exercise endurance on a treadmill at 12-months and the Duke activity status index (DASI) at both baseline and 12-months. QOL was assessed using the Seattle Angina Questionnaire (SAQ) and the Medical Outcomes Study 36-Item Short-From Health Status Survey (SF-36) at baseline and 12-months. Results: Patients were predominantly middle-aged men (56.3 ± 12.0 years, 81.4% male). Of the patients randomized to an invasive strategy, 78.6% received angiography. Of the patients randomized to the non-invasive strategy, 0.1% received functional testing. Cumulative revascularization rates were similar in both groups (24.3% vs. 29.0%, respectively). Maximum exercise endurance (sec) at 12-months did not show a significant difference between the two arms (763.1 vs. 686.7; P=.11). The invasive arm was found to have improved functional status by a mean difference of +8.8 (P=0.03) in DASI Score between 12-months and baseline. The invasive arm was also found to have improved QOL with the general health and physical functioning measures of the SF-36 showing a trend towards improved QOL (mean difference +5.7, P=.10; +13.2, P=.10, respectively). The SAQ angina stability and angina frequency measures showed a significant

POSTER SESSION

1196-108 Therapies for Acute Coronary Syndromes

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McCormick Place, Hall A
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1196-107 Percutaneous Coronary Intervention and Abciximab in Patients With ST Elevation Myocardial Infarction Complicated by Cardiogenic Shock

Uwe Zeymer, Ulrich Tebbe, Michael W. Weber, Hans-Friedrich Wöhrling, Karl-Ludwig Neuhaus, for the ALKK Study Group, Klinikum Ludwigshafen, Ludwigshafen, Germany

Background: Patients presenting with ST-elevation myocardial infarction (STEMI) complicated by cardiogenic shock have a high mortality despite early intervention therapy. Antithrombotic therapy with high intensity heparin infusion or abciximab has been shown to reduce ischemic complications after PCI and improve outcome. Therefore we performed a prospective multicenter study to evaluate a routine strategy of primary percutaneous intervention (PCI) and adjuntive therapy with abciximab in patients with STEMI complicated by cardiogenic shock. Methods: Forty patients with STEMI < 12 hrs. were enrolled in this trial. All patients received abciximab before or in the cath-lab before start of the PCI. Half of the patients had prior CVP and angiography were performed on enrollment in the study. A 3- vessel disease was present in 72.5% of the patients. An occluded infarct-artery (TIMI 0/1 flow) before PCI was observed in 85% of the patients. The patients were prospectively followed for 30-day outcome. Results: The intervention was successful in 92.5% of the patients. In patients >70 years (n=29) mortality was 24%, while all but one (101/1) of the patients > 75 years died. Conclusion: A routine strategy of primary PCI and adjunctive therapy with abciximab in patients with STEMI complicated by cardiogenic shock is safe and associated with a high rate of successful interventions and seems to improve outcome in patients ≥ 75.

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RR=Relative risk: *p<0.01 compared to Trl (+), no Reverse; **p=0.05 compared to Trl (-), Reverse.
improvement in the invasive arm (mean difference +29.5, P=0.01 vs. 18.5, P=0.04, respectively) and a trend in TIMI 4 treatment satisfaction measure (mean difference +19.2, P=0.07). All other measures were similar between the two arms.

Conclusion: Patients undergoing invasive management after non-ST-segment elevation AMI show improved functional status and quality of life.

1196-110 Left Ventricular Ejection Fraction, Enzyme Release, and Stem Implantation are Independent Predictors of Late Clinical Outcome After Late Opening of Infarct-Related Occlusion
Francesco Schiele, Lionel Thebaudt, Pradip Sawoie, Pierre Legalez, Marie-France Seronde, Nicolas Meunier, Jean-Pierre L. Bassand, University Hospital Jean-Minjoz, Besancon, France

Background. The potential benefit of re-opening occluded infarct-related arteries (IRA) by percutaneous coronary intervention (PCI) remains debated. We assessed the immediate and long term clinical outcome of patients submitted to systematic attempt at IRA re-opening in a setting of a sub acute (>72 hours and <10 days) myocardial infarction (MI).

Methods and Results. 199 consecutive patients matching these criteria were submitted to PCI and followed up for one year. Three endpoints were chosen: (1) = composite of death, new Q wave MI, peri-procedural creatinine kinase (CK) release >3 times the upper limit of normal, stroke, major bleeding or need for urgent revascularisation at 30 days; (2) = one year survival without stroke, new MI or unstable angina, and (3) = end point 2 plus 1. For this, we divided the patients into three subgroups according to the mentioned regimens: preASENOX (64 pts.); inASENOX (67 pts) and StSK (135 pts.). Enoxaparin was administered iv. 40 mg, before the first dose of 0.75 M.I. of SK and 1 mg/kg every 12 hours for 5-7 days. Heparin was infused 1000 i.u./hour for 48-96 hours. Three non-reinfusion repetition criteria were used: 1. Rapid cessation of the chest pain. 2.Rapid decrease of the ST segment elevation by more than 50% from the initial value. 3. Rapid increasing of the CK and CK-MB with a peak within the first 6 hours.

Results. The chest pain-thrombolyis time was 143+/-71 min in the preASENOX subgroup, significantly shorter than in the StSK subgroup (178+/-76 min., p=0.016) and the SISK one (171+/-78 min., p=0.013). The ratios of the coronary reperfusion were 81.2%, 76.1% and 60.7%, respectively (preASENOX vs SISK p=0.007; preASENOX vs SISK p=0.044). The inhospital mortalities were: 3.12% (preASENOX); 5.9% (inASENOX) and 10.4% (StSK); non-significant differences. Neither stroke nor other major hemodynamic events were registered in the three subgroups. Symptomatic hypertension was benign and appeared more frequent in the preASENOX (33%) and inASENOX (34%) subgroups as compared to the SISK one (20%).

Conclusions: 1. The preASENOX and inASENOX regimens are safe and lead toward a significant higher ratios of coronary reperfusion as compared to the SISK one. 2. Our data suggest a very low mortality in patients treated with the preASENOX regimen. Further investigation are needed for certify this attractive regimen.

1196-113 Erythropoietin Augments Cardiomyocyte Survival and Left Ventricular Function After Hypoxia
Cyriac P. Pansy, Aiko Matsumoto, G. Brant Walton, Jonathan S. Stampler, Walter J. Koch, Duke University, Durham, NC

Background: Erythropoietin (EPO) may have effects beyond hemopoiesis such as preservation of neuronal apoptosis secondary to ischemia. We evaluated EPO reenterence in myocardial ischemia. Methods: H9c2 myoblasts were used to test EPO's protection against hypoxia-induced apoptosis. Cells were pretreated with EPO (0.4 or 10U/ml) for 24 hours (hrs) and exposed to hypoxia (95%fO2,5%CO2) for 12 hrs followed by 19 hrs of re-oxygenation. Results: 1. Two hundred microliters of myocardial infarction (MI) was induced by LAD occlusion. Animals were randomized to receive a single dose of EPO (5000 units/kg) or saline or sham (no MI). On post-operative day (POD) 3, hemodynamic measurements were obtained. Hematocyte were drawn on POD 0, 1, 3, and 4. Hearts were harvested on POD 4 and infarct size quantified. Results: The graph shows that under all conditions tested, EPO prevented apoptosis in myoblasts. In vivo, 3 days after MI, EPO treated rabbits exhibited improved LV function, including contractility (p<0.05) and exhibited smaller infarct size. Protective effects were seen without increased hematocrit. Conclusions: EPO augmented myocyte survival after ischemia or

ORAL CONTRIBUTIONS
889 Current Correlates Implicating Myocardial Ischemia and Infarction
Wednesday, April 2, 2003, 8:30 a.m.-10:00 a.m.
McCormick Place, Room S102

889-1 Influence of Smoking on Manifestation and Clinical Outcome of Acute ST Elevation Myocardial Infarction in Clinical Practice: Results of the ACOS Registry
Christina Meissner, Anselm K. Gitt, Rudolf Schioe, Harm Wiblenber, Tobias Heer, Martin G. Goewk, Herizzem Ludwigshafen, Ludwigshafen, Germany. Klinikum Nürnberg Süd, Nürnberg, Germany

Background: Subgroup-analysis of large randomized trials with selected patients have shown a lower mortality after ST-Elevation MI treated with i.v. thrombolysis compared to non-smokers. Little data exist on the differences in outcome of ST-Elevation MI smokers and non-smokers in clinical practice.

Methods: Since June 2000 consecutive patients (pts) with acute corona}

JACC March 19, 2003

Myocardial Ischemia and Infarction

Oral Abstracts - Myocardial Ischemia and Infarction 399A

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Background: Subgroup-analysis of large randomized trials with selected patients have shown a lower mortality after ST-Elevation MI treated with i.v. thrombolysis compared to non-smokers. Little data exist on the differences in outcome of ST-Elevation MI smokers and non-smokers in clinical practice.

Methods: Since June 2000 consecutive patients (pts) with acute coronary syndrome (STEMI, Non-ST-Elevation Myocardial Infarction and unstable angina) have been