small myocardial infarcts were observed in the heart. Treatment with r-RGD-Hirudin,(1mg/kg and 5 mg/kg, n=12)significantly reduced the area and number of minor myocardial infarction(p<0.01 conpared with control). CONCLUSIONS: We present a new model of minor myocardial infarction in rats in which the small coronary arteries are occluded by microthrombi. This model is useful to investigate the pathophysiology and treatment of minor myocardial infarction which is common in interventional treatment. R-RGD-Hirudin may be beneficial in the treatment of minor myocardial infarction induced by PTCA.

1024-116 Implantation of Bone Marrow Stromal Cells Into Ischemic Myocardium Prevents Late Myocardial Remodeling

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Background The remodeling process is a major cause of heart failure and deaths after myocardial infarction (MI). Marrow stromal cell (MSCs) was shown to enhance angiogenesis and regenerate cardiomyocytes in rat ischemic heart model. This study is designed to test the effectiveness of MSCs implantation to reverse myocardial remodeling.
Methods Autologous MSCs were induced into a zone made ischemic by coronary artery ligation 1 week after MI via intramyocardial(n=10) or intracoronary (n=10) implantation. Control rats received medium (intramyocardial, n=10; intracoronary, n=10). Rats with EF <70 % 1 week after MI were included. Scar area index and the scar thickness is measured by computer-assistant planimetry as indices of myocardial remodeling 8 weeks after implatation. The diameter of myocytes in the peri-infarct zone were also measured. Histology study were done by HE and PTAH stain.
Results Eight weeks after implantations, serial section of transplanted area showing regenerated muscle tissue surrounded by host infarction scar in PTAH-stained heart section. left ventricular end-diastolic diameter reduced significantly in MSCs group (0.706±0.150 mm vs. 0.968±0.094 mm in control group, p<0.01). The scar area index also reduced in MSCs group (25.5%±5.2% vs. 45.3%±15.2% in control group, P<0.01) and the scar thickness increased in MSCs group (1.45±0.32 mm vs. 0.88±0.29mm in control group, P<0.01). Moreover, the myocytes at the peri-infarct zone of MSCs group were significantly larger than that of control group (diameter:0.033±0.011 mm vs. 0.021±0.009 mm, P<0.01).
Conclusion Our data indicate that MSCs implantation reversed myocardial remodeling and improved scar healing by regeneration of muscular tissue after MI.

POSTER SESSION

1025MP Moderated Poster Session...Controversies in Adjunctive Therapy for Acute ST Elevation Myocardial Infarction

Sunday, March 30, 2003, Noon-2:00 p.m.
McCormick Place, Hall A

Noon

1025MP-163 Safety of Adjunctive Glycoprotein IIb/IIIa Blockade During Rescue/Early Percutaneous Coronary Intervention Following Full-Dose Fibrinolytic Therapy for Acute Myocardial Infarction

Matthew T. Roe, Robert P. Giugliano, Robert Tuttle, Vic Hasselblad, Sabina Murphy, Elliott M. Antman, E. Magnus Ohman, Robert A. Harrington, Christopher B. Granger, Kenneth W. Mahaffey, Christopher P. Cannon, A. Michael Lincoff, C. Michael Gibson, Paul W. Armstrong, Frans J. van de Werf, Robert M. Califf, Eric J. Topol, Eugene Braunwald, Duke Clinical Research Institute, Durham, NC, TIMI Study Group, Boston, MA

Background: Glycoprotein (GP) IIb/IIIa inhibitors improve outcomes when used during primary PCI for ST-elevation myocardial infarction (STEMI), but the risks and benefits of GP IIb/IIIa inhibitors during rescue/early PCI after full-dose fibrinolytic therapy have not been well-characterized.
Methods: We performed a meta-analysis of data from 11 clinical trials evaluating new reperfusion regimens for STEMI (ASSENT 1,2, and 3, GUSTO III and V, TIMI 10B and 14, In-TIME-2, SPEED, FASTER, and INTEGRITI). Patients (n = 3,342) treated with full-dose fibrinolytic therapy who then underwent early PCI within 24 hours were included. The risks of moderate/severe bleeding by the GUSTO scale, intracranial hemorrhage (ICH), and 30-day mortality were evaluated stratified by the adjunctive use of GP IIb/IIIa inhibitors within the first 24 hours.
Results: Patients treated with GP IIb/IIIa inhibitors were younger (mean age 57.3 vs. 58.3 yrs), heavier (mean weight 84.8 vs. 81.6 kg), less commonly female (18.5% vs. 20.6%), less commonly had an anterior infarct (40.9% vs. 42.4%), and more commonly had diabetes (17.0% vs. 14.7%). Unadjusted outcomes are listed in the table.

	GP IIb/IIIa (n = 1038)	No GP IIb/IIIa (n = 2304)	Odds Ratio	95% CI	P-Value
Moderate/Severe Bleeding (%)	17.1	11.6	1.71	1.24-2.36	0.001
ICH (%)	0.48	0.89	0.75	0.26-2.13	0.586
30-Day Mortality (%)	3.7	4.9	0.78	0.54-1.15	0.214

Conclusions: In this post-hoc, non-randomized analysis, the use of GP IIb/IIIa inhibitors during rescue/early PCI following full-dose fibrinolytic therapy was associated with a higher rate of non-ICH bleeding complications. Prospective, randomized clinical trials are therefore needed to delineate the risks and benefits of this treatment strategy.

12:12 p.m.

1025MP-164 Prehospital Thrombolytic/Abciximab Therapy in Comparison to Facilitated Percutaneous Coronary Intervention After Combined Prehospital Thrombolysis in Acute Myocardial Infarction

Holger Thiele, Lothar Engelmann, Kathleen Elsner, Wulf-Hinrich Storch, Kazem Rahimi, Michael Hartmann, Dietrich Pfeiffer, Enno Boudriot, Mathias Kappl, Gerhard Schuler, University of Leipzig - Heart Center, Leipzig, Germany

Background: Prognosis in acute myocardial infarction (AMI) is mainly determined by early reperfusion and restoration of a normal flow in the infarct related artery. However, reperfusion therapy for AMI with thrombolysis has been shown to achieve a 50% TIMI-3-flow only. Early trials combining thrombolysis and PTCA have failed to show a mortality benefit mainly due to encountered bleeding complications. Since the reduced fibrinolytic therapy in combination with a platelet glycoprotein IIb/IIIa inhibitor (COMBO) has recently shown to reduce the rate of AMI related complications, "facilitated" PCI needs new evaluation.
Methods: Since 12/2000 120 patients with an AMI were randomized in Leipzig, Germany within 6 hours after symptom onset to either a prehospital COMBO (half dose Reteplase + abciximab) with in-hospital conservative therapy (n=58) or a prehospital initiated COMBO therapy with immediate in-hospital "facilitated" PCI+stent (n=62). Primary endpoints were ST-segment resolution at 90 min., infarct size expressed as area under the curve of CK-release and as delayed enhancement MRI. The secondary endpoint was a composite of mortality, re-AMI, major bleeding and stroke.
Results: Mean time from symptom onset to arrival of the emergency physician was 107± 81 min. in COMBO only in comparison to 105± 127 min. in the facilitated PCI-group (p=n.s.). In the facilitated PCI-group TIMI-3-flow before intervention was 65% and after 96%, respectively. 90-min ST-segment resolution was more complete in the facilitated PCI group (77± 56% vs. 58± 47%, p=0.04). Infarct size measured by CK-release was 900± 817 in the COMBO only versus 647± 462 µmol/l/h in the facilitated PCI-group (p=0.07) and 11± 8% versus 7± 6% in the delayed enhancement MRI (p=0.16). The secondary combined endpoint was similar in both groups without an excess in bleeding complications in the facilitated group. (14% vs. 13%, p=n.s.).
Conclusion: The prehospital combined thrombolytic therapy with abciximab is feasible and these results show that "facilitated" PCI+stent results in a an improved tissue perfusion as shown by the ST-segment resolution, which leads to a trend of smaller infarcts without excess in encountered complications.

12:24 p.m.

1025MP-165 A Prospective Multicenter International Randomized Trial Comparing Infarct Artery Stenting Alone With Infarct Artery Stenting Plus Abciximab in Acute Myocardial Infarction: Principal Report of the Abciximab and Carbostent Evaluation (ACE) Trial

David Antoniucci, Alfredo Rodriguez, Albrecht Hempel, Angela Migliorini, Guido Parodi, Antonio L. Bartorelli, Antonio Colombo, Giovanni M. Santoro, Guia Moschi, Renato Valenti, Leonardo Bolognese, Maurizio Trapani, Cesar F. Vigo, Careggi Hospital, Florence, Italy, Otamendi Hospital, Buenos Aires, Argentina

Background: Previous randomized studies comparing stent plus abciximab with stent alone in pts with acute myocardial infarction (AMI) have produced conflicting results about the benefit of abciximab as adjunctive treatment to infarct artery stenting. However, these studies enrolled mainly low-risk patients, or were done with first generation stents.
Methods: To determine the impact of abciximab therapy as adjunct to infarct artery stenting in AMI, 400 pts, without any restriction based on age or clinical status on presentation, were randomized at 4 sites to primary stenting alone (n =200) or stenting plus abciximab (n=200). The stent used was the Carbostent (Sorin, Italy). There were no angiographic exclusion criteria except for a reference infarct artery diameter < 2.5 mm. The primary endpoint of the study was the 1-month composite incidence of death, reinfarction, repeat target vessel revascularization (TVR), and stroke (MACCE).
Results: Mean age 63.7 ± 12.7; ≥ 70 yrs 36%; female 23%; diabetes 17%; anterior AMI 43%; cardiogenic shock 9%; not-low-risk patients (TIMI criteria) 66%; median time from