Early coronary patency evaluation of a platelet glycoprotein receptor antagonist (abiximab) in primary PTCA: the GRAPE-pilot study

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The best treatment of acute myocardial infarction (AMI) is achieving early patency of the infarct related artery (IRA). The results of thrombolysis and primary PTCA are already known. There is hardly any information about the effect of platelet glycoprotein receptor antagonists on early patency in AMI. In the GRAPE (Glycoprotein Receptor Antagonist Patency Evaluation) pilot trial we studied 41 patients (pt) with <6 hour AMI eligible for primary PTCA and with a total of 13 min of IRA segment elevation or more. At hospital admission all pts were given oral eptiopin 160 mg and 5,000 UI heparin together with a bolus of abciximab (ReoPro®) 0.25 mg/kg followed by a 12 hour infusion of 10 mg/kg. As soon as possible the pts were brought to the catheterisation lab to undergo angiography and, if necessary, primary PTCA. Results: Median time between abciximab bolus and first injection for angiography was 45 minutes (range 10-90). The culprit lesion was found to be the RCA in 17 pts, the RCX in 5 and the LAD in 21 pts. At first IRA injection there was a TIMI flow grade 3 in 12 (30%) pts. Two pts (5%) showed TIMI flow grade 2, in 27 (65%) pts the IRA was totally occluded (TIMI flow grade 0 and 1). Conclusion: These preliminary data suggest, that abciximab given early in patients with a large AMI eligible for primary PTCA can achieve IRA patency in a third of the pts.

R A Randomized, Placebo-Controlled Crossover Trial of ReoPro Alone or Combined with Low-Dose Plasminogen Activator for Coronary Reperfusion in Patients with Acute Myocardial Infarction: Preliminary Results

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We have previously observed rapid initiation of coronary flow by ReoPro without exogenous plasminogen activators (EPA) in patients (pts) with acute coronary occlusion. In an ongoing double-blind, placebo-controlled, crossover trial of ReoPro alone or in conjunction with low-dose Activase, 26 pts within 6 hr of onset of acute myocardial infarction (AMI) and ST -deviation elevation have received saline (325 mg PC) and heparin (70 Unit/kg) together with 7 Unit/hr Activase infusion. We present preliminary data on reperfusion in 25 pts (81%) of 31 pts randomized to blinded ReoPro 2.5 µg IV bolus and Activase 2000 µg IV bolus. The primary objective is to document infarct-related artery (IRA) patency within 60 min after ReoPro alone; the effect of adjunctive Activase on IRA patency is the secondary goal. Protocol: Angiography of the IRA is performed at 60-90 min (Angio # 1) after initial therapy, and then twice over to blinded ReoPro or placebo bolus, whichever was not initially given. Angio # 2 is performed 10 min later. Pts not achieving TIMI 3 flow are further randomized to blinded Activase (20 mg IV) or placebo bolus, and Angio # 3 15 min later. Blinded results to date: Treatment was initiated 2.9± 1 (mean± SD) hr after onset, and Angio # 1 performed 49± 14 min after randomization. At the time when all pts have had ReoPro alone for 10-90 min (Angio # 2) or Activase 2000 µg IV bolus, the IRA was TIMI 0 in 4 pts, TIMI 2 in 5 pts, TIMI 3 in 6 pts. An additional 22 pts will be enrolled. Conclusions: In this first randomized trial of a selective platelet glycoprotein IIb/IIIa receptor antagonist for reperfusion, alone or with low-dose adjunctive EPA, preliminary angiographic data shows that 50% of pts had TIMI 2 or 3 flow after ReoPro treatment alone.

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Angiographic Results from Platelet Receptor Inhibition for Ischemic Syndrome Management in Patients with Documented Unstable Angina or Non-Q-wave MI (PRISM-Plus)

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The angiographic (Angio) study in PRISM-Plus was designed to examine the effect of irtrofibran (TIR), a non-peptide platelet GP IIb/IIIa receptor blocker, compared to heparin (Hepl) on angiographically detected intracoronary thrombus (TIR). 1168 pts with documented unstable angina or non-Q-wave MI were randomized to Hepl or to CTH and had angiography a mean of 65± 17 (t = 0.007) after the randomization. Cutoff lesions were identified based on the ECG ischemic region and the details of anatomy and analyzed by subgroups. TIR was analyzed using the TIMI-THIR grade: 0 = absent, 1 = possible, 2 = small (< 0.5 x normal funnel diameter (NLD) at the greatest dimension), 3 = medium (0.5-1.5 x NLD), 4 = large (> 1.5 x NLD). TIR = recent focal occlusion. Flow past the culprit lesion was assessed using TIMI-flow grade. The primary and secondary angiographic endpoints were the % of pts with each grade of THIR and TIMI flow past the culprit lesion. Results: For 589 pts in CTH, the % of pts in THIR grades 0-5 were 58, 12, 12, 12, and 4, but were 53, 12, 9, 17, and 3 and 5 for SBHepl (p=0.002). The % of pts with TIMI -flow grade 3-0 were 58, 9, 1 and 8 in CTH, versus 74, 12, 3, and 11 in Hepl (p=0.0002). Conclusions: In PRISM-Plus, compared to Hepl alone, the CTH significantly reduced the