1123-40 Long-Term Outcome in Patients With Acute Myocardial Infarction Undergoing Primary Percutaneous Intervention: A Pooled Analysis of the Primary Angioplasty in Myocardial Infarction Trials

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Background: Primary percutaneous coronary intervention (PCI) at time of presentation for acute myocardial infarction has been shown to be an effective means of reperfusion. Short and long-term outcome data has been limited to reports in relatively small groups. This report reviews the in-hospital and long-term clinical outcome of patients randomized to PCI in the pooled databases of the PAMI trials. Factors predictive for adverse outcome in this group are analyzed.

Methods: We performed a pooled analysis of a total of 2970 patients from the databases of 5 primary coronary intervention trials (PAMI-I, PAMI-2, Stent PAMI, Air PAMI and PAMI No Surgery on Site), treated with primary percutaneous intervention. We studied the incidence of procedural complications and in-hospital, thirty day, six-month and one-year outcomes (death, reinfarction and composite endpoint of death or reinfarction); and performed risk factor analysis for adverse outcomes.

Results: Procedural success was achieved in 91% with TIMI-3 flow in 88%. 33% of patients underwent intracoronary stenting. In-hospital, 30-day, six-month and 1-year mortality were 3, 3.9, 5 and 6.4% respectively; with reinfarction occurring in 1, 1.4, 3.1 and 4% of patients respectively. The combined endpoint of death or reinfarction occurred in 3.2, 4.2, 7.9 and 9.8% respectively. Independent risk factors for adverse outcome at six months and one year were similar and included: age >70, heart rate >100, final TIMI flow <3, multivessel coronary disease, higher Killip class and lower ejection fraction.

Conclusion: Primary PCI for acute MI is associated with favorable in-hospital and long-term outcome, with prognostic predictors similar to thrombolysis trials. However, given a three-fold increase in the risk of death or reinfarction after hospital discharge, more aggressive evaluation and treatment after discharge may be necessary.

1123-41 Have the Outcomes of Rescue Angioplasty After Failed Thrombolytic Therapy in Acute Myocardial Infarction Improved in the Stent Era?

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Background: Compared to primary *balloon* angioplasty (BA) in pts with AMI not receiving antecedent thrombolytic therapy (TT), pts undergoing rescue BA after having received TT have reduced angiographic success rates and increased mortality and reinfarction. Whether the outcomes of rescue intervention have improved with stent implantation is unknown.

Methods: We examined the early and late outcomes of 191 consecutive pts stented within 12 hrs of AMI, 83 (43%) of who had received and clinically failed TT (94% t-PA; mean time from symptom onset to TT 229 ± 162 min). **Results**: Compared to primary stent (PS) pts, those undergoing rescue stenting (RS) were younger (55 ± 12 vs. 62 ± 14 yrs, p=0.0005), and were less likely to have suffered a prior CVA (2.4% vs. 14.0%, p=0.005) or undergone prior CABG (6.0 vs. 14.8%, p=0.05). Cardiogenic shock was present in 15.7% RS vs. 11.2% PS pts (p=NS), and IABP was required in 33.7% vs. 24.1% respectively (p=0.14). GP IIb/IIIa inhibitors were used with similar frequency in both groups (30.1% vs. 26.9%, p=NS). Clinical outcomes appear in the Table.

	RS (n=83)	PS (n=108)	P-value
TIMI-3 Flow Post Procedure (%)	93.3	95.7	0.99
In-Hospital:			
Death (%)	2.4	5.6	0.47
Reinfarction (%)	0	2.8	0.26
CABG (%)	1.2	1.9	1.00
TLR-PCI (%)	3.6	0.9	0.32
MACE (%)	3.6	7.4	0.35
Major Bleeding (%)	4.8	6.5	0.76
1-Year:			
Death (%)	7.6	14.1	0.17
Death - Non Shock pts (%)	6.1	6.9	0.42
Q-wave MI (%)	5.4	4.6	0.99
CABG (%)	2.7	1.2	0.59
TLR-PCI (%)	4.1	7.1	0.51
MACE (%)	18.8	23.0	0.49

Conclusions: In contrast to the previously reported worse outcomes of rescue balloon angioplasty after thrombolytic therapy, in-hospital and long-term outcomes of rescue stenting after failed thrombolysis in AMI are favorable, and similar to that of primary stenting without lytic therapy. These data support re-examination of combination early pharmacologic reperfusion followed by interventional strategies in AMI.

1123-42 Stenting in Acute Myocardial Infarction in Patients With Chronic Renal Failure: Predictors of In-Hospital and Long-Term Outcome

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Background: Although chronic renal failure (CRF) is associated with poor outcome after elective PCI, few data exist on clinical outcomes following stenting in acute myocardial infarction (AMI).

Methods: AMI patients (n=382) presenting within 72 hours of symptom-onset were divided in 2 groups: 27 pts with CRI (baseline creatinine ≥ 1.5mg/dl), and without CRI (no-CRI, n=355). Pts on dialysis were excluded from the study. Clinical follow-up was obtained in 95% of the patients.

Results: CRI pts were older (68 vs.61 years, p=0.005), had more often insulin-dependent diabetes (IDDM) (29.6% vs. 7.4%, p=0.001), history of stroke (25.9% vs.7.9%, p=0.007), and congestive heart failure (18.5% vs. 6.2%, p=0.03) compared to no-CRI pts. Angiographic success was obtained in 100% lesions in CRI pts and 98.9% in non-CRI, p=NS. Mean contrast volume was similar between 2 groups (239±131 vs.233.5± 106 ml, p=0.8).

	CRI (n=27)	Non-CRI (n=355)	p-value
In-Hospital:			
Pulmonary Edema (%)	25.9	9.3	0.01
Renal Failure (%)	23.1	4.3	0.002
Stroke (%)	7.4	0.3	0.01
Death (%)	11.1	3.4	0.08
MACE (%)	11.1	4.5	0.1
1-Year: Death (%)	17.4	7.9	0.1
TVR (%)	10.0	11.1	0.1
MACE (%)	26.1	15.8	0.2

MACE=death, MI, any TVR; TVR= target vessel revascularization.

By multivariate analysis female sex (OR=2.78; CI [1.12; 6.67], p=0.03) and IDDM were identified as predictors of 1-year mortality (OR=3.11, CI [1.07-9.07], p=0.04).

Conclusion: Primary stenting for AMI in CRF pts is associated with increased in-hospital complications and late mortality with similar reavscularization rates at 1 year. Increased late mortality in these pts is more likely secondary to higher comorbidities in this population. Female gender and DM remain as important independent predictors of late mortality after stenting.

1123-43 Poor One Year Prognosis in Acute Myocardial Infarction Patients With Saphenous Vein Grafts as the Infarct Related Vessel Treated by Primary Balloon Angioplasty

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Background: Previous small observational studies suggest that acute infarct angioplasty in saphenous vein grafts (SVG) is associated with a high incidence of adverse clinical events compared with mechanical reperfusion in native vessels. However, few data exist regarding long-term clinical outcome in this high-risk patient subgroup. Methods: In a pooled analysis of 3391 acute myocardial infarction (AMI) patients (< 12 hours from symptom-onset) from the PAMI-2, No Surgery-On-Site, Local PAMI, Stent-PAMI Randomized and Registry and Stent-PAMI Pilot were identified with a SVG as the culprit vessel. Survival at 1-month, 6-months and 1-year was compared to patients undergoing mechanical reperfusion in a native vessel. Results: Of the 3391 patients with AMI, 93 (3%) had a SVG as the infarct-related vessel (IRV). Compared with patients undergoing primary angioplasty in a native vessel, patients with a SVG culprit were older (67 vs. 61 yrs, p<0.001), more likely to have diabetes (32% vs. 16%, p=0.001), a history of MI (48% vs. 14%, p=0.001), have multi-vessel disease (94% vs. 48%, p=0.001), and a lower ejection fraction (43% vs. 49%, p=0.043). The incidence of initial TIMI-3 flow (10.8% vs. 11.1%, p=NS) and baseline diameter stenosis were similar between SVG and native vessel culprits. However, patients with a SVG culprit were less likely to achieve TIMI-3 flow after primary angioplasty (83% vs. 92%, p=0.004) despite similar final diameter stenosis. Compared to native vessel PTCA, patients with a SVG culprit had a significant higher mortality at 1-month (8% vs. 4%, p=0.043), 6-months (10% vs. 5%, p=0.052) and 1-year (20% vs. 6%, p<0.001). Conclusion: Though TIMI-3 flow can be achieved in a relatively high percentage of patients with a SVG IRV, long-term mortality is higher than in patients with native vessel as the culprit. New mechanical approaches are needed to improve the post-procedural TIMI-3 flow and long term survival.

1123-44 Effect of Treatment With Platelet Glycoprotein IIb/IIIa Inhibitors on In-Hospital Outcomes of Patients Treated With Primary Angioplasty for Acute Myocardial Infarction

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Background: Results of randomized clinical trials (RCT) differ regarding the effect of treatment with platelet glycoprotein IIb/IIIa (GPI) inhibitors on outcomes following primary angioplasty (PPTCA) for acute myocardial infarction (AMI). Even less is known regarding the effects of GPI on outcomes of PPTCA outside of the setting of RCTs. We sought to determine whether in-hospital outcomes following PPTCA are improved by GPI treatment.