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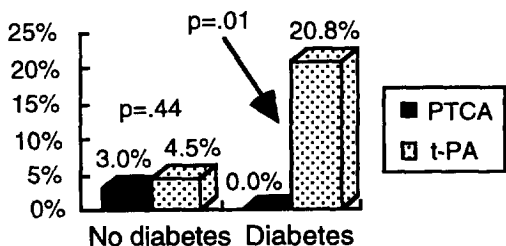
**Does Primary Angioplasty Improve the Prognosis of Patients with Diabetes and Acute Myocardial Infarction?**

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To examine the effect of different reperfusion modalities in pts with DM, the multicenter PAMI database was analyzed, in which 395 pts within 12 hours onset of acute MI were prospectively randomized to treatment with t-PA (n = 200) vs. primary PTCA (n = 195). DM was present in 50 (13%) pts. Compared to pts without DM, pts with DM were older (65 vs. 59 yrs, p = 0.002), more often female (40% vs. 25%, p = 0.03), more frequently had HTN (68% vs. 39%, p = 0.0001), prior CHF (8% vs. 1%, p = 0.0001), multivessel disease (76% vs. 51%, p = 0.01) and presented later (3.8 vs. 3.0 hours, p = 0.03).

In-hospital mortality was 10.0% in pts with DM vs. 3.8% in pts without DM (p < 0.05). By multivariate analysis of 16 variables, however, advanced age and treatment by PTCA rather than t-PA, but not DM correlated with in-hospital mortality.

Mortality stratified by treatment appears in the graph. Despite the apparently improved prognosis of pts with DM treated with PTCA vs. t-PA, the p value for the  $\chi^2$  test for interaction effect between DM and treatment modality was 0.86; most of the benefit of PTCA was present in the elderly population.



*In conclusion:* Pts with DM and acute MI have increased mortality, primarily because of advanced age. The outcome after PTCA compared to t-PA is improved in DM largely because of PTCA's beneficial effect in the elderly.

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**Coronary Flow Velocity of Infarct-Related Arteries: Physiologic Differences Between Complete (TIMI III) and Incomplete (TIMI 0, I, II) Angiographic Coronary Perfusion**

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Infarct artery perfusion, defined by TIMI grade angiographic flow has been demonstrated to correlate with post-infarction clinical outcome. In an attempt to define physiologic differences between complete (ie, TIMI III) and incomplete (ie, TIMI 0, I, II) angiographic grades of flow, we evaluated the proximal (n = 19) and distal (n = 45) coronary flow velocity (CFV) of the infarct-related artery (IRA) in 29 acute myocardial infarction patients (23 male, 6 female) before and after direct (n = 26) or rescue (n = 3) PTCA. CFV was assessed proximal and distal to the IRA lesion using a 0.014" Doppler-tipped guidewire. The mean time from symptom onset to coronary angiography was 84 ± 7 hrs. The IRA was the LAD (n = 18), RCA (n = 7), circumflex (n = 4).

TIMI Grade	Average Peak Velocity (cm/sec)		
	(n)	Proximal	Post-Stenotic
0-II	(9)	19.7 ± 9.5	(21) 12.5 ± 7.6*
III	(10)	27.4 ± 11.3	(24) 21.1 ± 12.4

\*p < 0.008 vs proximal and distal grade III

There were no differences in post-stenotic CFV between TIMI grade 0, I and II. Thus, distinct differences in CFV are observed in IRAs according to previously defined clinically important angiographic perfusion grades (ie, ≤II vs III). The higher distal CFVs observed among patients with angiographic "complete" compared to those with "incomplete" perfusion may partially explain their enhanced clinical outcome.

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**TIMI Grade 2 Flow is not Equivalent to TIMI 3: Implications for the Use of Thrombolytic Therapy. A Meta-Analysis of the Trials**

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Conventionally, infarct-related arteries (IRA) with TIMI grade 0 and 1 flow have been considered as occluded and those with TIMI grade of 2 or 3 as patent. This view has been challenged in several recent post myocardial infarction (MI), post thrombolysis, angiographic studies indicating different clinical outcome in patients with TIMI grade 2 flow compared to TIMI grade 3. To determine the validity of this concept we pooled the results of 12 different studies involving 3303 patients following MI where TIMI grade flows 90 minutes after initiation of thrombolytic therapy and mortality (up to 30 days post MI) were recorded.

	No	mortality n (%)			p value
		TIMI 0-1	TIMI 2	TIMI 3	
TAMI 1-7*	1229	34 (10.1)	13 (6.1)	29 (4.3)	NS
Vogt**	907	16 ( 7.1)	8 (6.6)	15 (2.7)	<0.01
GUSTO	1167	34 ( 8.9)	25 (7.4)	19 (4.4)	0.08
Pooled (%)	3601	8.9***	6.9***	3.7	0.001

\*TAMI results represent a composite of results from TAMI 1 to 7 trials and \*\*Vogt et al a composite of four different German trials, \*\*\*TIMI 0-1 vs TIMI 2, p = 0.1

*Conclusion:* TIMI grade 3 flow IRA at 90 minute following initiation of thrombolytic therapy is associated with 46% (odds ratio 0.52-95% CI: 0.35-0.78) reduction in mortality compared to TIMI grade 2 flow. Patients with TIMI grade 2 flow IRAs have similar outcome to those with TIMI grade 0 or 1. Therefore IRAs with TIMI grade 2 flow should be considered occluded and designated as reperfusion failure rather than success. In order to improve mortality post MI, it is important that new thrombolytic strategies aim to achieve early complete and sustained (TIMI grade 3 flow) IRA patency.

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**Trends in the Treatment of Post-Infarction Patients from 1984 to 1991**

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The purpose of this study was to determine if established recommendations for treatment after myocardial infarction have entered clinical practice. The Halifax MONICA database was used for this study. It contains clinical and treatment information on all acute myocardial infarctions (AMI) in patients, aged 25 to 74, in a defined community. The data are obtained from chart reviews and standardized criteria are used to establish the diagnosis of AMI. The treatment pattern of hospital-based physicians (HP) was assessed by the frequency of major cardiac medications prescribed at discharge of AMI patients. The treatment pattern of family physicians (FP) was estimated by comparing the medication profile at discharge with that on a subsequent re-admission. There were 2827 patients discharged with a diagnosis of AMI. Discharge medication was not recorded on 182 charts (6.4%). For the remaining cases a major change in prescribing pattern occurred during the observation period. The use of aspirin (ASA) rose from 16% to 78%, ACE inhibitors (ACEi) increased from 3% to 21%,  $\beta$ -blockers ( $\beta$ B) had decreased from 49% to 41% but then rose to 60%. On the other hand, Ca antagonists (CaA) rose from 25% to 50% and then declined to 36%. In 1011 patients with re-admission, family physicians had not altered the prescription in 77% for ASA, 84% for ACEi, 75% for  $\beta$ B, and 77% for CaA. When changes were made, addition outweighed removal for ACEi and CaA, while the opposite happened with ASA and  $\beta$ B. There was a marginally significant decrease in post-discharge 6-months mortality from 7.1% to 4.3% during the observation period (p = 0.04). We conclude that post-MI prescribing of HP follows closely the publication of major clinical trials and precedes the publication of professional recommendations. FP generally followed the discharge prescriptions, showing similar preferences for additional medication as HP. The change in prescribing pattern may have contributed to the decreased post-discharge mortality.

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**Outcome of Different Reperfusion Strategies in Thrombolytic "Eligible" versus "Ineligible" Patients with Acute Myocardial Infarction**

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Pts considered "not eligible" for inclusion in most early U.S. thrombolytic trials because of advanced age, late presentation, prior CABG or shock have a very poor prognosis; thus, some have suggested broadening the criteria for lyric eligibility. To examine the role of different reperfusion strategies in pts

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