

in order of importance were older age (VSD-71 vs No VSD-61), anterior MI (67% vs 39%), female sex (50% vs 25%), lower weight (70 kg vs 78 kg), and hypertension (54% vs 38%); all $p < 0.001$. Patients with VSD more often developed shock (63% vs 6%), CHF (63% vs 16%), reinfarction (10% vs 4%), and recurrent ischemia (35% vs 20%). Compared with patients treated surgically ($n = 32$), medically treated patients ($n = 88$) had similar age (72 vs 71) but more often had anterior MI (69% vs 63%), lower systolic BP (120 vs 130), higher pulse (82 vs 78), and Killip class III-IV (4% vs 7%) at baseline. **Conclusions:** Despite reperfusion therapy, VSD after MI carries a poor prognosis. Patients selected for surgery have better outcomes.

5:00

721-5 Mitral Regurgitation Following First Myocardial Infarction Is an Indicator of Poor In-Hospital and Long Term Prognosis

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Mitral Regurgitation (MR) following Myocardial Infarction (MI) is frequent. We prospectively studied 279 pts with first MI by color flow Doppler for MR on admission, to document its prevalence and association with in-hospital and long term adverse cardiac events classified as: death, pulmonary congestion/cardiovascular shock (PC/CS), reinfarction or post infarction angina (R/PIA), and ventricular fibrillation or tachycardia (VF/VT). MR was present in 138/279 (50%) of pts and in 158 (57%) 1 yr follow-up was available. Pts with MR were older mean age 62 ± 14 vs 57 ± 13 ($P = 0.001$), and had a higher incidence of inferior Q wave MI 70/201 (70%) vs 57/141 (57%) - $P = 0.05$ compared to pts without MR. In-hospital adverse cardiac events are shown below:

	DEATH	PC/CS	R/PIA	VF/VT	OTHER
MR	7%	24%	37%	9%	56%
NO MR	2%*	15%*	26%*	9%	42%*

* $P < 0.05$

During follow-up, death and CHF was significantly higher in pts with MR vs those without, 10% vs 3% ($P = 0.05$) and 15% vs 1% ($P = 0.002$). RI was more common in pts without MR 13% vs 4% ($P = 0.05$). **Conclusion:** MR is common following first MI. It is more frequent with advanced age and inferior Q wave infarction. In hospital and late mortality and adverse cardiac events are significantly greater in patients who show MR on admission echo doppler study.

5:15

721-6 Acute Myocardial Infarction in Young Patients: The Significance of Smoking. Results From the GUSTO-1 Trial

Mark C.G. Horigan, Dave P. Miller, Christopher Granger, Robert M. Califf, Eric J. Topol, for the GUSTO Investigators. *Department of Cardiology, Cleveland Clinic Foundation, Cleveland OH*

Patients receiving thrombolytic therapy for myocardial infarction in the GUSTO trial were grouped by age < 40 ($n = 1687$; 4.1%) or ≥ 40 years ($n = 39259$). "Young" patients were more often male (98% vs 74%; $P < 0.0001$), and less often hypertensive or diabetic ($P < 0.0001$). More young patients were smokers at entry (77% vs 42%; $P < 0.0001$) or had family history of coronary disease (56% vs 42%; $P < 0.0001$). Sixteen percent of young patients were not white (black 6%, other 10%), while 8% of those aged ≥ 40 were not white (black 3%, other 5%); both $P < 0.0001$.

While time to treatment was similar (3.1 ± 1.7 vs 3.1 ± 1.6 hours), young patients had greater peak CK levels. Peak CK was higher in smokers from both groups ($P < 0.0001$), however, linear modeling identified an interaction between age < 40 and smoking. Smokers < 40 had significantly higher peak CK levels than older smokers; whereas no age effect was evident among non-smokers.

	Age < 40	Age ≥ 40	P-value
Peak CK S.D.	2313 \pm 2314	1916 \pm 1814	< 0.01
Peak CK smokers	2461 \pm 2446	2033 \pm 1942	< 0.001
Peak CK non-smokers	1835 \pm 1728	1834 \pm 1711	0.996
Hospital Death (%)	1.1	6.9	< 0.0001
30-day mortality (%)	1.3	7.2	< 0.0001
Shock (%)	2.0	6.1	< 0.0001
Re-infarction (%)	1.7	4.1	< 0.0001
Heart Failure (%)	7.1	16.6	< 0.0001

While the outcomes in young patients are favorable compared with those of older patients, the profile is not without important sequelae. In this group precocious coronary atherosclerosis with symptomatic plaque rupture is strongly

associated with smoking, and smoking is associated with evidence of more extensive myocardial necrosis.

722 Stenting for Acute Myocardial Infarction

Monday, March 25, 1996, 4:00 p.m.-5:30 p.m.
Orange County Convention Center, Room F1

4:00

722-1 STENTIM I: The French Registry of Stenting at Acute Myocardial Infarction

Jean Pierre Monassier, Joseph Elias, Pierre Meyer, Marie Claude Morice, Thierry Royer, Alain Cribier. *CH Mulhouse, France*

Coronary stenting was generally contraindicated in acute myocardial infarction. The aim of this registry is to evaluate the in hospital outcome of patients undergoing coronary stenting in the first 14 days of acute MI. From January 94 to September 95, 340 patients underwent coronary stenting within 14 days of acute MI in 20 French centers. PTCA was performed within 12 hours in 134 (40%) patients (group 1) and between day 1 to day 14 in 206 (65%) patients (group 2).

Indications for PTCA were as follow: primary PTCA 98/134 (73%), cardiogenic shock 11/134 (8.2%), rescue PTCA 25/134 (19%) in group 1 and recurrence of ischaemia 116/206 (56%), elective 90/206 (44%) in group 2.

Indications for stenting were as follow: non occlusive dissection 82% and 60%, occlusive dissection 10% and 8.2%, elective 7.5% and 32%, respectively in group 1 and 2. These patients received 366 stents (302 PS, 40 Wiktor, 12 Roubin and 6 AVE).

All these patients were treated with Ticlopidine 250 mg/d and Aspirin 100 mg/d for 1 month, continuous IV Heparin for 72 hours and LMWH for 7 to 14 days.

Results:

	Group 1	Group 2
Procedural success	128/134 (95.5%)	200/206 (97%)
Stent thrombosis	4/134 (3%)	3/206 (1.45%)
Emergency CABG	2/134 (1.5%)	2/206 (1%)
Death	6/134 (4.5%)	4/206 (1.9%)

Conclusion: after these encouraging results of this registry, a randomized trial "STENTIM II" comparing PTCA to PTCA + stenting in acute MI is now going on in order to validate this method.

4:15

722-2 One Week and Six Months Angiographic Controls of Coronary Stent Implantation During Primary Angioplasty for Acute Myocardial Infarction

Christian Spaulding, Khaldoun Ben Hamda, Laurent Roussel, Yann Chalet, Jacques Monsegu, Antoine Py, Romain Cadot, Olivier Tsokanakis, Simon Weber. *Cochin Hospital, René Descartes University, Paris, France*

The correction of a suboptimal result or an occlusive dissection during Primary Angioplasty for Acute Myocardial Infarction (PAMI) by stent implantation remains controversial. We therefore performed one week and six months angiographic controls in 45 patients with coronary stents implanted during PAMI.

Methods: A single Palmaz-Schatz stent was implanted in 45 patients (38 male, mean age 55.1 ± 18) for suboptimal results (34) or occlusive dissections (11) during PAMI on the LAD in 31 and the RCA in 14. Mean LV ejection fraction was $40 \pm 10\%$. Stent deployment was optimized using high pressure inflations. Final stent diameter was 3.6 ± 0.3 mm. Angiographic images of thrombus were present before stent implantation in 30 cases and after in 3. All patients were treated with Ticlopidine (500 mg/day), aspirin (250 mg/day) and low molecular weight heparin (0.1/10 kg b.i.d. for seven days).

Results: Two patients died of refractory cardiogenic shock on day two despite a patent stent. Angiographic controls were performed 7 ± 2 days after PTCA in the remaining 43. All stents were patent with no visible image of thrombus. One patient died at two months of a non cardiac cause. A six month control angiogram was performed in 39 patients and revealed non occlusive restenosis in six. Despite the initial presence of thrombus, no stent occlusion was noted on one week and six months angiographic controls.

Stent implantation during PAMI seems feasible if optimal stent deployment can be performed.