ministration ($p < 0.0005$ for either dosage), and 0.05 mmol/kg produced significantly higher SI inf/norm than 0.1 mmol/kg (1.42 ± 0.069 vs. 1.34 ± 0.055 respectively, $p = 0.015$). *Conclusion:* Gd BOPTA is a useful contrast agent to assess myocardial infarction. Optimal results are obtained with a dosage of 0.05 mmol/kg body weight Gd-BOPTA. Persistent enhancement of infarcted and normal myocardium suggests an affinity of Gd-BOPTA for myocytes, making it a promising tool in MR imaging of ischemic heart disease.

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Tuesday, March 21, 1995, 9:00 a.m.–11:00 a.m.
Ernest N. Morial Convention Center, Hall E
Presentation Hour: 10:00 a.m.–11:00 a.m.

940-71 Relative Importance of Acute Left Ventricular Function, Infarct Artery Patency, and Improvement of Left Ventricular Function for Late Survival After Direct Angioplasty for Acute Myocardial Infarction

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Of 663 pts with acute infarction treated with direct angioplasty, 576 hospital survivors were followed 5.3 yrs (median). Late ejection fraction (EF) data were obtained in 54% of pts at 6–8 mos. There were 48 late cardiac and 37 non-cardiac deaths. Late infarct related artery (IRA) patency was 92%. Multivariate predictors of late cardiac mortality by Cox regression were acute EF ($P = 0.0001$), improvement in EF ($P = 0.0001$), prior bypass surgery ($P = 0.005$), and female gender ($P = 0.05$). Late survival was excellent in pts with acute EF $\geq$ 45% vs pts with acute EF < 45% (7 yr survival 89% vs 71%, $P = 0.004$). Patency of the IRA was not a significant predictor of late survival in pts with acute EF $\geq$ 45%, but was a significant univariate predictor in pts with acute EF < 45% (6 yr survival patent vs occluded: 89% vs 35%, $P = 0.004$). Patency was important for improvement of left ventricular function (LVF) (late improvement in EF in patent vs occluded IRA: + 4.8% vs − 4.8%, $P = 0.001$). Although patency was important for survival in pts with depressed LVF by univariate analysis, in a multivariate model which included both patency and improvement in EF, only improvement in EF was a significant independent predictor ($P = 0.0001$).

Conclusion: Acute LVF is the most important determinate of late survival. IRA patency is important for late survival in pts with depressed acute LVF, but this appears to be related to its effect on improvement in LVF rather than through an independent effect.

940-72 Effect of Late Coronary Angioplasty of an Infarct-related Vessel on Left Ventricular Function

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Conflicting results regarding a possible beneficial effect of *late* percutaneous transluminal coronary angioplasty (PTCA) of an infarct-related vessel on left ventricular function have been reported. These discrepancies may be related to relatively low numbers of patients, to the heterogeneous nature of the populations studied, to low sensitivity of the technique used to detect changes in LV function, or to incomplete follow-up. We studied 100 consecutive patients who had successful PTCA of a left anterior descending artery lesion $\geq$1 month after an anterior myocardial infarction (MI) and who underwent systematic angiographic follow-up 6 months later. TIMI flow pre-PTCA was <3 in 30% of the patients. The parameters of LV function assessed pre-PTCA and at 6 months using quantitative angiography were ejection fraction (EF), end-diastolic volume index (EDVI), end-systolic volume index (ESVI), and segmental wall motion in five segments of the anterior wall (SWM1 through 5).

	Before PTCA	Follow-up	
EF (%)	53.3 ± 15.4	53.8 ± 13.7	NS
EDVI (ml/m^2)	92.9 ± 22.8	96.4 ± 27.7	NS
ESVI (ml/m^2)	44.2 ± 21.7	46.2 ± 24.6	NS
SWM1 (%)	33.3 ± 16.6	34.8 ± 15.3	NS
SWM2 (%)	25.7 ± 25.2	26.5 ± 26.5	NS
SWM3 (%)	21.1 ± 29.2	21.8 ± 32.2	NS
SWM4 (%)	18.6 ± 29.3	17.6 ± 32.7	NS
SWM5 (%)	12.4 ± 25.7	14.0 ± 25.9	NS

Conclusion Whereas direct PTCA for acute MI has a documented beneficial effect on LV function, our results demonstrate that PTCA of an infarct-related lesion performed more than 1 month after the MI is not associated with any long term improvement in LV function.

940-73 Predictive Value for Major Arrhythmic Events of Ventricular Arrhythmias Detected in the Subacute Phase of a Fibrinolysed Myocardial Infarction. An Analysis of the GISSI-2 Data Base

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The relationship between ventricular arrhythmias (VA) in the subacute phase of a myocardial infarction and subsequent major arrhythmic events (MAE) was mainly defined in the prefibrinolytic era. We examined the large population of patients enrolled in the GISSI-2 study in order to evaluate the significance and predictive power for MAE (sustained ventricular tachycardia -SVT- and sudden death -SD-) of VA detected by Holter monitoring during the subacute phase of a fibrinolysed acute myocardial infarction (AMI). Of the 12,381 pts. enrolled in the GISSI-2 study, an Holter monitoring was available in 8,676 and a six month follow-up was completed in 7,713. During the follow-up 84 pts. died suddenly and 26 experienced one or more SVT. The relationship between VA and MAE was evaluated by odds ratio (OR) and their 95% confidence intervals. OR for MAE was 4.5 (2.7–7.5) if the Holter showed >10 ventricular ectopic beats per hour; 2.3 (1.5–3.7) if couplets were present; 3.3 (1.5–7.0) if nonsustained ventricular tachycardias (NSVT) were noticed; 3.0 (2.0–4.5) if any complex VA was detected. A multivariate analysis (Cox model) including the major prognostic determinants confirmed the independent prognostic value of VA in the Holter recording except for NSVT. Any arrhythmic parameter had a very low positive predictive power (from 2.4 to 3.0%). In conclusion, our data show that VA still have, in the fibrinolytic era, a prognostic significance for MAE, but the predictive power is very low and is therefore mandatory to add other variables to identify the pts. more at risk.

940-74 Spontaneous Delayed Reperfusion of Infarcted Area Limits Progressive LV Remodeling After Anterior Q-Wave MI

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We recently documented that perfusion and contraction in the infarct zone improve after the first 5 weeks after MI in a substantial percentage of pts (delayed reperfusion), suggesting a period of hibernation after acute MI. Although early reperfusion is known to prevent LV remodeling, it is unknown whether this delayed (>5 weeks) spontaneous reperfusion has any effect on progressive LV remodeling. Thus, we evaluated prospectively 79 consecutive pts (50 ± 8 years; thrombolysis in 58 pts) 5 weeks and 7 months after a first uncomplicated Q-wave anterior MI. Resting regional contraction and perfusion were serially evaluated by quantitative 2D-echo and Sestamibi tomography. At 5 weeks, all pts had significant (>2SD normal values) wall motion abnormalities (WMA) and perfusion defects in the infarcted area.

A significant (>95% reproducibility limits) improvement of perfusion in the infarcted area was documented at 7 months in 50 pts (63%, REP) while perfusion was unchanged/worsened in 29 pts (noREP). At 5 weeks, the extent of perfusion defect and WMA in the infarcted area, EF, end-diastolic volume index (EDVi, ml/m^2), regional dilation (RDIL) and expansion index (EXP) were comparable between REP and noREP.

At 7 months, noREP pts showed increased EDVi (66 ± 14 vs 70 ± 18, $p < 0.05$), a slight increase in RDIL (27 ± 25% vs 32 ± 30%, NS), with unchanged WMA (37 ± 14% vs 36 ± 17%), EF (45 ± 12% vs 46 ± 13%) and EXP (1.1 ± 0.1 vs 1.1 ± 0.3). In contrast, REP pts showed no changes in EDVi (60 ± 15 vs 61 ± 18) and RDIL (21 ± 21% vs 21 ± 26%) and improvement in WMA (31 ± 15% vs 26 ± 20%, $p < 0.05$), EF (51 ± 13% vs 55 ± 14%, $p < 0.01$) and EXP (1.1 ± 0.1 vs 1.0 ± 0.4, $p < 0.05$). The results suggest, for the first time, that spontaneous reperfusion occurring as late as >5 weeks after anterior Q-wave MI can limit the degree of LV remodeling at 7 months. This raises the possibility that delayed (>5 weeks) interventional recanalization may be beneficial in pts with persistent perfusion defects after acute MI.

940-75 Effect of Coronary Revascularization on Left Ventricular Remodeling in Patients Receiving Thrombolytic Therapy for Myocardial Infarction: A One Year Follow-up

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Remodeling starts in the acute phase of myocardial infarction by infarct formation and expansion. Thrombolytic therapy in the acute phase may affect infarct formation. Whether coronary revascularization (CR) in the subacute or chronic phase may add to the prevention of dilatation is not known. In a post-hoc analysis, we investigated the effect of coronary angioplasty (PTCA) and coronary bypass surgery (CABG) on left ventricular volume assessed by serial echocardiography during a one year follow-up.