Clinical ischemia related events (PTCA, CABG, MI, unstable AP and death), and anti-anginal medications were reported after 1 month placebo. Baseline parameters were comparable between the groups. During the 1 month single blind placebo period, 10 ischemia related events were reported (placebo n = 1 and captopril n = 9, (–p < 0.05, placebo vs captopril). Anti-anginal medication was prescribed in 6 (5%) and 13 (14%) patients, resp. (p < 0.05, placebo vs captopril). It is concluded that, after stopping captopril, more ischemic events and increased use of anti-anginal medication were reported then in the placebo group, suggesting a rebound phenomenon.

11:15

787-4 Level of Anticoagulation Achieved in Myocardial Infarction Patients Following Chronic Administration of Fixed, Low-Dose Warfarin Therapy: Results from the Coumadin Aspirin Reinfarction Study (CARS)

R.A. Harrington, S. Berkowitz, M. McDougal, C.M. O'Connor, A. Langer, P.T. O'Gara, S.L. Kopecky, J.M. Sutton, J. Hainer, R. Lee, J.M. Feyzi, L. Jett, R.M. Califf, V. Fuster for the CARS Investigators. *Duke Clinical Research Institute, Durham, NC, USA*

CARS tested the hypothesis that the combination of aspirin and fixed, low-dose warfarin would be superior to aspirin in preventing death, reinfarction and stroke following a myocardial infarction (MI). Patients were randomized 3–21 days post MI to one of three treatment arms: aspirin 160 mg (Group A), warfarin 1 mg + aspirin 80 mg (Group B), warfarin 3 mg + aspirin 80 mg (Group C). Patients received a double loading dose on the first two days. At each visit (weeks 1–4, 6, 12, every 12) citrated whole blood was shipped overnight to a central laboratory where a prothrombin time was reported as an International Normalized Ratio (INR). Blinded dose reductions were made for an INR ≥3.5 on two consecutive measures. Median (25, 75) INRs by treatment groups:

Visit	Group A (n = 2835)	Group B (n = 2028)	Group C (n = 2829)
Week 1	1.03 (0.99, 1.07)	1.06 (1.01, 1.12)	1.54 (1.24, 2.17)
Week 2	1.03 (0.99, 1.07)	1.06 (1.02, 1.12)	1.48 (1.20, 2.17)
Week 3	1.03 (0.98, 1.07)	1.05 (1.01, 1.12)	1.36 (1.16, 1.90)
Week 6	1.02 (0.98, 1.06)	1.05 (1.01, 1.11)	1.22 (1.10, 1.53)
Month 12	1.02 (0.98, 1.06)	1.04 (1.00, 1.10)	1.20 (1.08, 1.50)

A steady state INR was reached and maintained by week six with the majority of patients having INRs considerably less than the standard level of anticoagulation typically used in clinical practice (INR 2.0–3.0). The low level of anticoagulation obtained may in part explain the equivalence in outcomes among the treatment arms in CARS.

11:30

787-5 Influence of Hypertension and Blood Pressure on the Survival Benefit of ACE Inhibition After Acute Myocardial Infarction

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Low blood pressure following an Acute Myocardial Infarction is a relative contraindication for ACE inhibition. We studied interrelation of the beneficial effect of ACE inhibition with blood pressure at start of treatment and a diagnosis of hypertension in the Trandolapril Cardiac Evaluation (TRACE) study. *Methods:* In TRACE 1749 patients with moderate to severe left ventricular dysfunction (wall motion index ≤ 1.2) were randomised to long-term treatment with the ACE inhibitor trandolapril or placebo. Overall the mortality reduction of trandolapril was 22%. At randomisation 263 patients had systolic blood pressure (SBP) ≤ 100, 427 had SBP 101–110, 426 had SBP 111–120, 459 had SBP 121–140 and 174 had SBP > 140. A history of hypertension was present in 400 patients. Calculations are based on Cox proportional hazard models and wall motion index, heart failure, gender, age and thrombolysis are included ad confounding factors in the models. *Results:*

Subgroup	Risk Reduction with Trandolapril
No diagnosis of hypertension	0.9 (0.75–1.1)
Diagnosis of hypertension	0.6 (0.46–0.85)
SBP < 100	1.0 (0.7–1.5)
SBP 101–110	0.88 (0.65–1.2)
SBP 111–120	0.76 (0.55–1.0)
SBP 121–140	0.88 (0.65–1.2)
SBP > 140	0.57 (0.35–0.92)

Conclusion: The beneficial effect of Trandolapril seems to be more marked in patients with a history of hypertension or a relative high blood pressure on entry.

11:45

787-6 Mortality Rate After Myocardial Infarction Equally Increased in Diabetic Patients Treated with Oral Antidiabetic Agents and Insulin

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Patients with diabetes have a poor prognosis after myocardial infarction (MI). However, the relation to different types of diabetic treatment, MI complications and residual systolic function is uncertain. The aim of the present study was a further evaluation of these relationships. *Methods:* 5960 patients with confirmed MI, surviving 2 days after admission were included in the study. Preadmission medical history, including type of diabetic treatment, complications during hospital stay and echocardiographic evaluation of ventricular wall motion index (WMI) were obtained, as well as 3 year mortality data.

Results: % mortality

	Non-diabetics	Diet	Tablets	Insulin
Number	5367	173	319	125
1 year	17.0	24.3	29.2	29.6
2 year	23.2	34.3	42.8	41.7
3 year	28.8	41.7	53.7	51.6

By multivariate analysis including age, sex, WMI, history of hypertension and pervious MI, diabetes was found to be an independent predictor of mortality (odds ratio 1.488 (95% CI: 1.221.814))

Conclusion: Patients with diabetes have a poor prognosis after MI, with a significant increased mortality rate, regardless of other risk factors. This increased mortality is similar in patients treated with insulin and oral anti diabetics agents.

788 Nuclear Cardiology: Myocardial Viability

Wednesday, March 19, 1997, 10:30 a.m.–Noon
Anaheim Convention Center, Room A9

10:30

788-1 Prevalence and Time-Course of Functional Improvement in Stunned and Hibernating Myocardium in Patients with Coronary Artery Disease (CAD) and Congestive Heart Failure (CHF)

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It has been demonstrated that NH3/FDG-positron emission tomography (PET) predicts the recovery of regional function of ischemically compromised myocardium. The present study evaluated the time course and the extent of improvement of "hibernating myocardium" (flow-metabolism-mismatch; HIB) and of "stunned myocardium" (normal flow/metabolism but impaired function; STU). 26 patients with CAD and CHF (EF = 27%) were functionally assessed by 2-d echocardiography using a 5-point grading system from –1 (dyskinesia) to 3 (normal function) preoperatively, 10 days, 4 month and one year after CABG. 213 revascularized free-wall LV-segments with wall motion abnormalities were examined: 28.2% of the segments displayed HIB, while the remaining 71.8% STU. Ten days after CABG 50% of HIB segments regained normal to near normal function. Four months and one year after CABG, however, 73.1% and 87% displayed this functional improvement. In contrast, 76.5% of STU segments regained normal to near normal function after 10 days ($p = 0.005$), after 4 month 84.8% ($p = 0.01$) and after 1 year 85.4% (n.s). The results suggest that in patients with marked LV-dysfunction scintigraphic patterns of "stunning" are more pronounced than that of "hibernation". Preoperatively, "hibernating myocardium" displays more severe wall motion abnormalities with slower recovery; after one year, however, the degree of functional improvement is similar in both situations. For early recovery "stunned myocardium" appears to be more important.