However, no clinical studies have evaluated the characteristics of VF with respect to DER. Forty patients; 13 with idiopathic cardiomyopathy and 27 with coronary artery disease, undergoing defibrillator testing were included. A step down DER was measured in each patient. A DER <10 J was defined as low (Group A: 8-92 VF episodes), 10-15 J intermediate (Group B: 45 VF episodes) and >15 J as high (Group C: 59 episodes). 166 VF episodes were digitized for off-line analysis. The power spectral density (PSD) at a frequency range of 1.5-25 Hz was derived for each of the VF episodes. Results: DER, by group, was 7±1 (A), 14±2 (B), and 21±.3 (C). PSD analysis demonstrated significant differences between group A & C at 2 frequency ranges: 3.5±0.46 (A) vs. 3.6±0.60 (C), p<0.02, and 21±1.3 (A) vs. 21±.1 (C), p<0.02 (ANOVA). The results of this study suggest that VF may not be as heterogeneous as arrhythmia as previously thought. VF can be characterized by frequency ranges which correlate with DER, indicating a physiologic significance of the PSD analysis.

Do Monophasic Action Potentials Reliably Reflect Intracellular Action Potentials During Ventricular Fibrillation?
Paulus Kirchhof, Larissa Fabritz, Ruben Coronel, Tobias Opthof, Michel J Janse, Michael Ri Franz. VAMC and Georgetown University, Washington DC USA, University of Münster, Münster:Germany, University of Amsterdam, The Netherlands

Monophasic action potential recordings (MAPs) increasingly are being used in a variety of experimental and clinical settings and recently also during ventricular fibrillation (VF). MAPs have been shown to correlate closely with transmembrane action potential recordings (TAPs) during regular rhythms. However, because MAPs reflect potentials from a large number of cells, the multiplicity of wavefronts during VF might distort the TAP-MAP correlation. The purpose of this study was to test the validity of the MAP during VF. In right ventricles of 5 isolated, Langendorff-perfused rabbits with a microelectrode TAP was recorded from an epicardial site opposite an endocardially placed MAP catheter tip. VF was induced by T wave shocks, 173 simultaneously recorded MAP and TAP complexes during VF were analyzed for activation time (AT), cycle length (CL) and action potential duration at 50% repolarisation (APD50). Activation of MAP and TAP signals was slightly associated (AT difference 4.1 ± 13 ms, mean ± 2 SD). Extremely short and low amplitude signals were observed in both MAP and TAP recordings. Cycle length and action potential duration were not different between microelectrode and MAP recordings (see table). Conclusion: MAPs reliably represent cellular activation and repolarization wave forms even during VF, making them useful for studying VF in the in-situ setting including patients.

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Long Term Outcome After Early Prehospital Thrombolysis: Influence On Mortality and Event Free Survival
Mark A. Brouwer, Charles Maynard, Jenny S. Martin, Mark Wirkus, Feiik WA. Verheugt, Douglas W. Weaver. Free University Hospital, Amsterdam NL, University Hospital Nijmegen, NL, University of Washington, Seattle WA

Prehospital thrombolysis in patients (pts) with acute myocardial infarction (AMI) shows better efficacy compared to in-hospital thrombolysis. However, its long-term effects are unknown. In the Myocardial infarct Trial and Intervention (MITI) trial 580 pts with AMI ≤ 6 hours were randomised to prehospital or in-hospital thrombolysis with t-PA. Time to treatment was reduced by 33 minutes by prehospital initiation of thrombolysis, but clinical outcome was similar in both groups. Pts were followed over a period of 34 ± 6 months. Two years survival was 88% for prehospital and 91% for in-hospital treatment. Eventfree survival was 55% and 64% resp. However, in pts in both arms treated within 70 minutes after symptom onset survival was 98% versus 88% in those treated > 70 minutes. By multivariate analysis advanced age, history of heart failure and/or coronary surgery prior to admission, but not time to treatment (p=0.84) were markers for long-term mortality. Thus, irrec prescholar admission, time to treatment is a major determinant for late mortality in thrombolysis for AMI. However, elderly patients and those with a cardiac history face a longer time to treatment influencing their long-term survival.

Triage of patients with suspected myocardial infarction by using a prehospital decision rule: Feasibility and safety
Arthur C Mass, Els W Grijspeer, Jan A Hartman, Ad Prins, Jaap W Deckers, Martin L Simoons. Erasmus University Rotterdam, Rotterdam The Netherlands, Municipal Health Department, Rotterdam The Netherlands

Background: From 1992 to 1994 a decision rule (DR) for prehospital triage was developed and validated. Multivariaate predictors of acute pathology were: abnormal ECG, male gender, radiation of chest pain, nausea/sweating and prior cardiac disease. Methods: Symptoms were received by the general practitioner (GP) using a standardized questionnaire and a computerized ECG analysis. A total of 1214 pts were evaluated over a 12 month period. Mean age was 58 and 54% were female. Of these, 465 (35%) were admitted for further evaluation and therapy, 850 (65%) were discharged home. The average length of stay was 16.7 ± 1.2 day in the CPEU, 3.2 ± 0.9 in the Emergency Department. Ct was ruled out by exercise [or treadmill in 179 of 254 pts, or treadmill echo in 261 of 306 pts, dobutamine echo in 166 of 159 pts, or Thallium in 20 of 31 pts, and drug therapy at 30 of 49 pts. Of the 590 pts with negative stress tests, 8 (1.3%) have been readmitted with other documented MI (2) or Cl (6). Of these 590 pts, 2 have died (0.3%). Both of noncardiac causes. Average changes for pts evaluated in the CPEU were slightly higher than that of a similar cohort admitted to the standard telemetry unit ($2,532 vs $4,621). Telephone followup of 93% of pts revealed they were satisfied with their care (94.5% excellent, 5% average, 0.5% poor). Thus, use of a CPEU and CP protocol with CK Isoforms allows for the rapid triage of pts with CP. Pts with negative early stress testing can be safely discharged home, reducing length of stay and charges while providing positive patient outcomes and satisfaction.

EARLY HOSPITAL DISCHARGE OF CHEST PAIN PATIENTS USING CREATINE KINASE ISOFORMS AND STRESS TESTING - A COMMUNITY HOSPITAL EXPERIENCE
Thomas F Trahey, Sherry L Dunaway, Amanda B Thompson, Douglas L Hill, Umberto G Fontana, David C Beard, Paul T Campbell. Cabarrus Memorial Hospital, Concord NC USA

Rapid and cost efficient evaluation of patients (pts) with chest pain (CP) is essential. A Chest Pain Evaluation Unit (CPEU) and CP protocol was established to rule-out CP over a 12 month period. Mean age was 58 and 54% were female. Of these, 465 (35%) were admitted for further evaluation and therapy, 850 (65%) were discharged home. The average length of stay was 16.7 ± 1.2 day in the CPEU, 3.2 ± 0.9 in the Emergency Department. Ct was ruled out by exercise [or treadmill in 179 of 254 pts, or treadmill echo in 261 of 306 pts, dobutamine echo in 166 of 159 pts, or Thallium in 20 of 31 pts, and drug therapy at 30 of 49 pts. Of the 590 pts with negative stress tests, 8 (1.3%) have been readmitted with other documented MI (2) or Cl (6). Of these 590 pts, 2 have died (0.3%), both of noncardiac causes. Average changes for pts evaluated in the CPEU were slightly higher than that of a similar cohort admitted to the standard telemetry unit ($2,532 vs $4,621). Telephone followup of 93% of pts revealed they were satisfied with their care (94.5% excellent, 5% average, 0.5% poor). Thus, use of a CPEU and CP protocol with CK Isoforms allows for the rapid triage of pts with CP. Pts with negative early stress testing can be safely discharged home, reducing length of stay and charges while providing positive patient outcomes and satisfaction.