

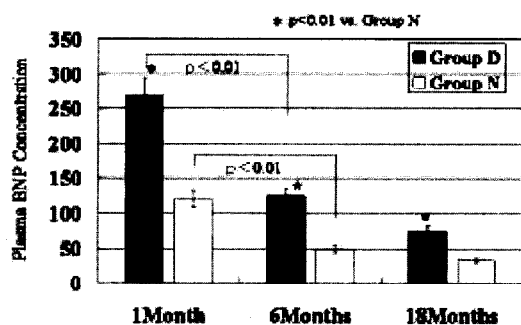
9:48 a.m.

10:12 a.m.

1159MP-167 Sustained Elevation of B-Type Natriuretic Peptide Concentrations in Patients With Left Ventricular Remodeling After Myocardial Infarction

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Objectives: The aim of this study is to clarify the serial change in plasma brain natriuretic peptide (BNP) concentration along with left ventricular (LV) remodeling. **Methods:** Plasma BNP concentrations were measured by the radioimmunoassay in 92 patients with first anterior myocardial infarction at 1 (1M), 6 (6M) and 18 months (18M) after the onset. LV volumes were calculated by LV grams at 1M and 18M. Significant dilatation of end-diastolic volume, defined as increment more than 10 ml/m² from 1M to 18M, was observed in 32 patients (group D) and not in 60 patients (group N). **Results:** There were no significant differences in patients' characteristics and LV functions at 1M. Plasma BNP concentration at 1M of group D was significantly higher than that of group N (268±70 vs. 120±21 pg/ml; p<0.01). Plasma BNP concentrations in both groups decreased significantly from 1M to 6M (p<0.01), and plasma BNP concentration of group D was still significantly higher than that of group N (123±34 vs. 49±9 pg/ml; p<0.01). Plasma BNP concentrations did not change significantly after 6M in both groups, but plasma BNP concentration was still significantly higher in group D than group N (74±30 vs. 33±10 pg/ml; p<0.01). **Conclusion:** Plasma BNP concentration decreased independent of LV dilatation within 6M after the onset, however its sustained elevation of plasma BNP level was observed in patients with LV remodeling.



10:00 a.m.

1159MP-168 Serum Aldosterone Is Associated With Left Ventricular Remodeling in Women but Not Men: Framingham Heart Study

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Background: Aldosterone is associated with myocardial fibrosis in experimental studies, and with LV remodeling in CHF patients. We hypothesized that aldosterone influences LV remodeling in people without CHF in the community.

Methods: We studied 1027 subjects (mean age 56 years, 59% women) without CHF or MI who had serum aldosterone measured and underwent routine echocardiography.

Results: Aldosterone levels were similar in men and women. In sex-specific regression-adjusting for age, systolic BP, weight, height, diabetes, heart rate and hypertension treatment- aldosterone was positively associated with LV mass (LVM), wall thickness (LVWT) and relative wall thickness (RWT) in women but not in men (Table). Aldosterone was not related to LV dimensions or systolic function in either sex.

Conclusions: In our community-based sample, serum aldosterone was associated with increased LVM and LVWT, and altered LV geometry in women but not men. Additional investigations are warranted to elucidate the mechanism of these gender-related differences in aldosterone effect.

Serum Aldosterone and LV Measures*

Aldosterone Quartiles	Q1	Q2	Q3	Q4	P (Trend)
WOMEN					
LVM, gm	137	140	143	143	0.04
LVWT, cm	1.77	1.80	1.85	1.85	<0.001
RWT	0.40	0.40	0.41	0.42	<0.001
MEN					
LVM, gm	197	195	192	199	0.93
LVWT, cm	2.05	2.03	2.03	2.06	0.81
RWT	0.41	0.41	0.41	0.41	0.78

*LV measures adjusted for age, SBP, weight, height, diabetes, heart rate and HTN Rx.

1159MP-169 Right Ventricular Systolic Dysfunction Correlates With Adverse Left Ventricular Remodeling in Patients With Advanced Heart Failure

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Background: Right ventricular dysfunction occurs to a variable degree in left heart failure, with a number of factors potentially influencing its development. Newer echocardiographic techniques of Doppler-derived dP/dt and -dP/dt allow the quantification of RV and LV systolic and diastolic function. In this study we investigated multiple parameters of LV size and function as possible associates of RV systolic dysfunction (assessed by Doppler-derived RV dP/dt). **Methods:** We studied 40 patients with advanced chronic heart failure (age 61 ± 15 years; EF 23 ± 10%; ischemic etiology 55%; NYHA Class 2, 3, or 4 symptoms in 1, 25, and 14 patients, respectively). Doppler-derived RV dP/dt was determined in each patient from the continuous-wave Doppler spectrum of the tricuspid regurgitation jet (RV dP/dt = 12/time between 1 and 2 m/s). Doppler-derived LV dP/dt and -dP/dt were determined from the continuous-wave Doppler spectrum of the mitral regurgitation jet (LV dP/dt = 32/time between 1 and 3 m/s; LV -dP/dt = 32/time between 3 and 1 m/s). Other echocardiographic variables included LV end-systolic and end-diastolic diameters, LVEF, E/A ratio, severity of MR and TR, and peak TR pressure gradient. **Results:** RV dP/dt was significantly associated with LV end-systolic diameter (r = -0.43, p = 0.006), LV end-diastolic diameter (r = -0.42, p = 0.007), LV -dP/dt (r = 0.37, p = 0.020), and LV dP/dt (r = 0.32, p = 0.042). In contrast, RV dP/dt was not significantly associated with LVEF, MR or TR severity, peak TR pressure gradient, or a "restrictive" E/A. With multivariable linear regression modeling, if either LV end-systolic or LV end-diastolic diameter was included, neither LV dP/dt nor LV -dP/dt remained significant independent predictors of RV dP/dt. When all univariable predictors were evaluated, the only independent predictor of RV dP/dt was LV end-systolic diameter. **Conclusion:** Adverse LV remodeling, marked by increased LV end-systolic and end-diastolic diameters, is an important marker of RV systolic dysfunction in patients with advanced heart failure.

10:24 a.m.

1159MP-170 Carvedilol Increases Ejection Fraction and Decreases Left Ventricular Diameters in Patients With Severe Heart Failure of Ischemic and Nonischemic Etiology: Results From the EFICAT Multicenter Trial

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Background: In severe heart failure (CHF) or transplant candidates (HTC) improved survival & cardiac function were shown on carvedilol (C), but the impact of CHF etiology on the effect of C on ejection fraction (EF) and capacity to influence LV remodeling in HTC are unclear.

Method: A double blind, placebo (P) controlled 12 months trial was conducted in 3 German transplant centers. HTC with cardiomegaly and CHF were eligible. Endpoints were changes from baseline to latest available value of LVEF (RNV) and LV enddiastolic and end systolic dimensions (EDD, ESD, echo) in C- and P-treated HTC.

Results: The trial prospectively randomized 118 HTC (53.3 ± 9.8 years) with end stage CHF of ischemic (I, n=44) or non-ischemic (NI, n=74) etiology and a mean LVEF at baseline of 19.9 ± 6.6 (20.1)% with a change of +6.0 ± 9.3 (+3.9)% in the C-treated and +0.7 ± 7.1 (0.0)% in the P-treated group (p<0.008, Wilcoxon two-sided test). In the subgroups, the change in LVEF was in HTC-I +5.2 ± 7.0 (+4.0)% in the C-treated vs. -5.3 ± 6.8 (-5.5)% in the P-treated group (p<0.03); in HTC-NI the change in LVEF was +9.9 ± 11.6 (+8.0)% in the C-treated vs. +2.7 ± 7.6 (0.0)% in the P-treated group (p<0.04). The mean EDD and ESD at baseline were 73.8 ± 8.2 (74.0)mm and 64.7 ± 9.0 (64.0)mm in the C-treated and 75.8 ± 9.1 (74.0) and 66.3 ± 10.0 (66.5)mm in the P-treated group (all NS). These values decreased significantly in the C-, but not the P-treated group (p<0.03 and p=0.05, resp.). In the subgroups, the changes in EDD were in HTC-I +2.3 ± 8.6 (+1.0)mm in the C- and +4.3 ± 6.3 (+4.0)mm in the P-treated group, in HTC-NI -3.0 ± 6.2 (-3.0)mm in the C- and +1.1 ± 7.1 (+1.0)mm in the P-treated group. The changes in ESD were in HTC-I +0.4 ± 9.7 (0.0)mm in the C- and +2.7 ± 8.6 (+2.0)mm in the P-treated group, in HTC-NI -6.1 ± 7.5 (-5.0)mm in the C- and -1.2 ± 7.3 (-2.0)mm in the P-treated group.

Conclusion: Even in HTC with end stage CHF C-therapy improves significantly LVEF over a prolonged period of time irrespective of CHF etiology. While the significant decrease in mean ESD mainly corresponds to improved pumping performance, the concomitant significant decrease in mean EDD observed particularly in HTC with NI-CHF suggests reverse remodeling induced by C-treatment even in these individuals.

10:36 a.m.

1159MP-171 Heart Failure Following ST Elevation Myocardial Infarction: Are We Aggressive Enough?

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Background: Prior studies suggest heart failure (HF) complicating myocardial infarction (MI) is associated with poor prognosis, thus current guidelines emphasize early catheterization. Data are sparse regarding differences in treatment across the spectrum of HF following fibrinolysis.

Methods: We categorized the 15,078 patients enrolled in a recent fibrinolytic mega-trial (InTIME-II) into one of 4 hierarchical, mutually exclusive groups of HF as follows: 1=Shock (n=719, 4.8%); 2=Severe (n=1082, 7.2%); 3=Mild (n=1619, 10.8%); 4=None