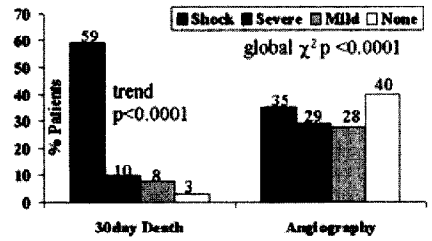
(n=11658, 77.3%). Baseline characteristics, in-hospital therapies, and clinical outcomes were compared across the spectrum of HF.

Results: Patients with more severe HF were older (68 vs. 66 vs. 65 vs. 60), more likely female (35% vs. 34% vs. 28% vs. 23%) with larger (peak CK: 2922 vs. 2688 vs. 1888 vs. 1646) and more anterior MIs (57% vs. 59% vs. 48% vs. 39%) (p<0.0001 for all comparisons). Although 30-day mortality was highest for shock and severe HF (Figure), these patients were less likely to have angiography (31% vs. 40%, p<0.0001) and revascularization (20% vs. 25% p<0.0001) than patients without HF.

Conclusions: 23% of patients developed HF during the index admission following fibrinolysis. Despite a higher risk profile, patients with more severe HF were treated less aggressively than patients without HF. Current practice is not in line with MI guidelines and the SHOCK trial results.



10:48 a.m.

1159MP-172 **Predictive Value of Tissue Doppler Echocardiographic Findings on Positive Left Ventricular Remodeling Induced by Cardiac Resynchronization Therapy**

Lothar Faber, Barbara Lamp, Juergen Vogt, Johannes Heintze, Bert Hansky, Reiner Koerfer, Dieter Horstkotte, Heart Center North Rhine-Westphalia, Bad Oeynhausen, Germany

Background: Resynchronization of left ventricular (LV) contraction is considered a mechanism for the clinical benefit observed in heart failure patients (CHF-pts.) with a wide QRS complex treated by cardiac resynchronization (CRT). We analyzed whether mechanical LV asynchrony as assessed by tissue Doppler echocardiography (TDE) and its correction by CRT is predictive for echocardiographic measures of LV size and function during long-term follow-up.

Methods and results: 76 CHF-pts treated with CRT were studied. Pt. selection for CRT was based on clincal and ECG criteria plus invasive hemodynamic testing. TDE curves of septal, inferior, anterior, and lateral wall segments were obtained at baseline and 6±4 (1-12) months after CRT. Pts. were classified as TDE-responders (TDE-R: asynchrony at baseline, corrected by CRT) vs. non-responders (TDE-NR: either not asynchronous at baseline, or persisting asynchrony despite CRT). After a mean follow-up of 21±6 (12-33 months), pts. were additionally grouped as showing reverse LV remodeling (LVF-R: diameter reduction of >10%) vs. LV non-remodelers (LVF-NR). Results are summarized in the table.

Conclusions: The LV remodeling effect of CRT is largely limited to TDE-R, while TDE-NR demonstrated very limited benefit. TDE evaluation should therefore be routinely performed in pts. considered for CRT. Traditional selection criteria including hemodynamic testing do not reliably predict the success of CRT with respect to echo measures of LVF.

Variable	TDE-R (n=44)	TDE-NR (n=32)	p-value
Baseline LV diameter (mm)	81±9	82±10	0.6
LV diameter reduction (mm)	10±9	3±8	<0.001
Baseline LV-EF (%)	22±8	23±9	0.6
LV-EF gain (%)	9±10	-1±13	<0.001
LVF-R (n;%)	35 (85%)	6 (15%)	<0.001
LV filling time gain (ms)	84±177	26±119	0.04
Baseline QRS width (ms)	180±17	188±22	0.5

Cardiac Function and Heart Failure

POSTER SESSION

1160 Cardiomyopathy: Restrictive Disease

Tuesday, April 01, 2003, 9:00 a.m.-11:00 a.m.
McCormick Place, Hall A
Presentation Hour: 10:00 a.m.-11:00 a.m.

1160-76 **Ventricular Long Axis Function in Restrictive Disease: Comparison Between Cardiac Amyloidosis and Idiopathic Restrictive Cardiomyopathy**

Enrica Perugini, Christine O'Sullivan, Claudio Rapezzi, Philip Poole-Wilson, Michael Y. Henein, The Royal Brompton Hospital, London, United Kingdom, Istituto di Cardiologia, Bologna, Italy

Background: In restrictive cardiomyopathy left ventricular (LV) cavity size is usually maintained although filling pressures are raised. Long axis function represents the subendocardium that is known to be affected by raised atrial pressure. The purpose of this study was to assess different components of ventricular function in patients with restrictive cardiomyopathy with particular emphasis on long axis function.

Methods: Between 1993 and 2002, we studied 30 patients with restrictive cardiomyopathy: 16 with cardiac amyloidosis (CA) (age 62±3 years) and 14 with idiopathic restrictive cardiomyopathy (IRCM) (59±16 years) using Doppler echocardiography. Standard ventricular echocardiographic measurements were assessed as well as long axis amplitude from left, septal and right ventricular free wall.

Results: CA patients had significantly worse heart failure symptoms (NYHA class 3±1 vs 2±1, p=0.01) and less frequent atrial fibrillation (18% vs 71%, p=0.005) compared with IRCM. The incidence of restrictive LV filling and left atrial dilatation was similar in the two groups. However, LV thickening fraction (TF) was below the 95% normal confidence interval in all CA patients compared to only 36% of IRCM, p<0.0001. The LV fractional shortening (FS) was reduced in 75% of CA group versus 7% of IRCM, p<0.0001. LV and right ventricular long axis function were depressed in all CA patients compared with 14% at the left side, 36% at the septum and 64% at the right side in patients with IRCM, p<0.0001. In the 30 studied patients LV long axis function correlated with TF, FS and LV mass. In a multiple regression analysis, only TF, LV mass and right ventricular long axis were independently correlated with LV long axis function.

Conclusion: In CA although ventricular cavity size is maintained, minor axis systolic function is frequently poor as is TF and long axis function. In IRCM the extent and frequency of these disturbances is much less along with lower functional class. Such clear differences in cardiac function between CA and IRCM, may justify not considering them as a single clinical entity.

1160-77 **Histopathologic Findings in Amyloid Heart Disease: Comparison Between AL and ATTR Amyloidosis and Genotype-Phenotype Correlations**

Ornella Leone, Enrica Perugini, Claudio Rapezzi, Carlo Magelli, Fabrizio Salvi, Michela Santi, Francesco Grigioni, Fabio Coccolo, Angelo Branzi, Istituto di Cardiologia, Bologna, Italy, Istituto di Anatomia Patologica, Bologna, Italy

Background.. Most of the current knowledge on the histopathologic features of cardiac amyloidosis comes from AL amyloidosis where fibrillar deposit consists of immunoglobulin light chains. Data on transthyretin related (ATTR) myocardial involvement are very few. ATTR amyloidosis is caused by mutant transthyretin encoded by a single gene on chromosome 18 and is inherited in an autosomal dominant fashion.

Methods. We prospectively collected and reviewed histologic data from right ventricular endomyocardial biopsy of 41 patients with AL (30 cases) or ATTR (11 cases) cardiomyopathy. Patients were divided in three groups: AL, non-Met30 ATTR, Met30 ATTR amyloidosis.

Results

	AL	**Non-Met30 ATTR**	**Met30 ATTR**
N. of patients	30	8	3
Age (yrs)	**59 ± 9** ***	**46,5 ± 9**	**48,3 ± 8**
Infiltration	87%	62%	33%
severe	13%	38%	67%
mild-moderate			
Distribution	**87%** *	62%	0
diffuse	13%	38%	100%
moderate			
Localization	100%	75%	100%
interstitial	57%	87%	100%
endocardial	**67%** **	12%	0
vascular			
Inflammatory reaction	16%	13%	0

*** p= 0.0005 AL vs ATTR; * p= 0.02 AL vs ATTR; ** p= 0.004 AL vs ATTR

Conclusion. Cardiac amyloidosis includes a wide range of histologic alterations. This variability is associated not only with the different degree of amyloid deposition, but also with its different location (endocardial and/or interstitial and/or vascular), the type of distribution (diffuse vs focal) and the eventually concomitant inflammatory reaction. The overall severity of histologic abnormalities is maximal in AL type, whereas it appears