lower blood pressure and serum Na and were more likely to have had a recent HF hospitalization (all P < 0.001). Results. Shown below are 1-year Kaplan-Meier rates and Cox model hazard ratios (CRV:PBO):

	Spironolactone			No Spironolactone		
	PBO (n=225)	CRV (n=220)	Hazard ratio	PBO(n=908)	CRV (n=936)	Hazard ratio
All-cause mortality	19.1%	11.4%	0.65	18.4%	11.3%	0.65
Death or hospitalization for worsening HF	39.3%	26.3%	0.63	37.5%	25.4%	0.70
Death or cardiovascular hospitalization	41.6%	29.1%	0.61	41.6%	30.4%	0.75
Death or any hospitalization	47.2%	38.4%	0.76	53.3%	42.1%	0.76

CRV reduced the risk of a major clinical event in patients on spironolactone to an extent similar to that seen in patients not on spironolactone.
Conclusion. These data indicate that the morbidity and mortality of patients with severe HF receiving drugs that interfere with more than one neurohormonal target can be reduced substantially with further neurohormonal antagonism (with CRV).

1157-160 Beta-Blocker Utilization in Heart Failure Patients: Experience From a Heart Failure Clinic

Ritesh Gupta, W.H. Wilson Tang, James B. Young, *Cleveland Clinic Foundation, Cleveland, Ohio.*

Background: Beta blockers (BB) reduce mortality in heart failure (HF) patients. Though, well tolerated in clinical trials, utilization rates in clinical settings have not been studied.
Methods: Retrospective analysis of 500 consecutive HF patients presenting to a HF clinic between 3/01 to 5/01 (mean age 61, 69% males, 53% ischemic, mean LVEF 27%). Chi-square test was utilized for subgroup analysis.
Results: 75% of patients had been given a BB trial and 69% were currently on BB. The use of BB was more in moderate (LVEF 20 - 40, n=236) compared to mild (LVEF >40, n = 92) and severe (LVEF <20, n =141) HF (73% vs. 60% and 65%, p=0.04). BB use also decreased with worsening NYHA class of HF symptoms (I 78%, II 72%, III & IV 60%, p=0.01). No difference in BB use by gender was seen (68% in males vs. 71%, p=0.5). Discontinuation rate was 6.8% and was not influenced by NYHA class (p=0.3). Down titration was required in 5.2%. Side effects leading to stopping or down titration, included dizziness (3.2%), fatigue (2.8%), hypotension (2.6%), bradycardia (2.0%), and others (1.4%). A contraindication could be identified in 44% of patients never tried on BB with respiratory disease being the most common in 33%, uncompensated state in 7%, A-V block in 1% and hypotension in 1.6%. Subgroup of diabetics had lower BB use than non diabetics(60% vs 73%, p=0.02) with more contraindications (36% vs. 18%, p < 0.01) and worse NYHA class (p= 0.03) though LVEF was similar (p=0.5). Trend towards lower BB use was seen in elderly patients (age >74) than younger patients (61% vs. 71%, p=0.06) but there was no difference in rate of contraindication to BB(29% vs. 23%, p= 0.1).
Conclusion: High utilization rates for BB (69% current usage) can be achieved with an aggressive approach to initiating BB therapy. Respiratory diseases are the most common reason of not initiating BB therapy. Diabetics and elderly patients are less likely to be on BB. Diabetics tend to have more contraindications to BB and worse NYHA class than non diabetics, which may explain lower use of BB in them. Elderly patients do not show this trend and lower use in this group needs further investigation.

POSTER SESSION

1158

Chagas, Diabetes, Scleroderma, and Cardiomyopathy

Tuesday, March 19, 2002, 9:00 a.m.-11:00 a.m.
Georgia World Congress Center, Hall G
Presentation Hour: 9:00 a.m.-10:00 a.m.

1158-146 Phosphoramidan Ameliorates the Functional Sequelae of Experimental Chronic Chagasic Cardiomyopathy

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Background. *Trypanosoma cruzi*, the etiologic agent of Chagas' disease, is an important cause of chronic cardiomyopathy. Coronary microvascular spasm, in part mediated by endothelin-1, appears to play a significant role in the pathogensis of experimental chronic chagasic cardiomyopathy. **Aim.** We sought to assess if the administration of an endothelin inhibitor, phosphoramidan, could influence the severity of cardiomyopathy in mice infected with *T. cruzi*. **Methods.** Therefore we infected cd1 mice (n=21) with 10^4 trypomastigotes of the Brazil strain of *T. cruzi*. Of these, 8 were treated with phosphoramidan. An additional 8 uninfected littermates served as controls (C), 3 of which received phosphoramidan. All mice (n=29) survived and were evaluated at 150 days post infection by transthoracic echocardiography. Left ventricular (LV) end diastolic diameter (EDD), relative wall thickness (RWT), and fractional shortening (FS) were measured. Right ventricular (RV) size was assessed semi-quantitatively on a scale of 0-3. **Results.** There was no effect of phosphoramidan on LV EDD, RWT, FS or RV in uninfected (C) mice. Infected, untreated mice (INF) had increased LV EDD (3.2±0.1 v 2.8±0.1mm, p<0.05), along with reduced FS (39±2 v 57±1%, p<0.05) and RWT (0.4±0.0 v 0.5±0.0, p<0.05), compared with C. Treatment with phosphoramidan reduced the magnitude of these changes, such that the infected, phosphoramidan treated mice (INF+P) had no significant differences in LV EDD (2.9±0.1 v 2.8±0.1mm), RWT (0.5±0.1 v 0.5±0.1), and FS (57±2 v 50±4%) compared with C mice. Similarly, RV was larger in INF compared with both C and INF+P mice (2.1±0.3 v 1.5±0.4, INF v INF+P respectively, p<0.01). **Conclusion.** These data indicate that phosphoramidan ameliorates the functional sequlae of experimental chronic chagasic cardiomyopathy.

1158-147 Molecular Epidemiology of Cardiac Actin Gene Mutations in Dilated Cardiomyopathy

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Background: Dilated cardiomyopathies (DCM) are characterized by a large ventricular dilatation and impaired systolic function. There is a strong genetic component in DCM, estimated to be present in approximately 20-30percent of cases. Mutations in exons 5 (Arg312His) and 6 (Glu361Gly) of cardiac actin gene (ACTC) have been reported in two families with DCM. Methods: In order to evaluate prevalence and characteristics of ACTC gene mutations in DCM, 62 patients from different ethnic backgrounds were studied: 17 with sporadic DCM, 45 with familial DCM (belonging to 31 unrelated families). Two patients with ischemic heart disease were used as controls. Genomic DNA was extracted from blood or explanted heart tissue using standard procedures. PCR products were generated from all 6 exons of the ACTC gene, allowing the inclusion of the exon/intron boundaries. Mutation analysis of all 6 exons was performed using denaturing high performance liquid chromatography (DHPLC) and sequence analysis. Results: No mutation was found in any of the six ACTC exons. A single nucleotide polymorphism was detected by DHPLC, and confirmed by sequence analysis in intron 5 (C-62T). Conclusions: ACTC mutations do not seem to be associated with DCM in our large population of familial and sporadic DCM. ACTC mutations appear to be infrequently associated with DCM.

1158-148 Noninvasive Assessment of Coronary Flow Reserve Impairment in Patients With Systemic Sclerosis

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Background. Systemic sclerosis (SSc) is a chronic connective tissue disorder of unknown etiology, characterized by cutaneous and visceral tissue fibrosis with arteriolar and capillary ischemic dysfunction . The pathogenesis of the cardiac lesion in SSc is controversial, but the primary disorder of microvasculature with diffuse arteriolar and capillary lesions could precede any fibrosis, thus causing ischemic disorder to the heart. CFR is used to evaluate coronary microcirculation, and has been already employed to investigate myocardial microcirculation impairment in SSc. Previous invasive studies have demonstrated that coronary flow reserve (CFR) is impaired in patients (pts) with advanced SS and cardiac involvement. We tested the hypothesis that CFR can be early impaired in patients with systemic sclerosis without cardiac involvement and whether CFR impairment is correlated to the cutaneous subset.
Methods. We studied 26 patients with SSc without clinical evidence of heart disease, (14 with diffuse form and 12 with localized form of SSc) and 22 control group patients, matched in age and gender. We evaluated CFR in the left anterior descending coronary artery (LAD) with a new non-invasive method : contrast (Levovist) enhanced transthoracic Doppler (CEE-TTE) during adenosine infusion. The pulsed wave Doppler of blood flow velocity was recorded in the LAD at rest and after maximum vasodilation by adenosine infusion (140 mcg/Kg/min in 5 minutes).
Results: In patients with SSc, without clinical evidence of heart disease, CFR was impaired (2.65±0.63 vs 3.29±0.52 in controls, p < 0.0005). A significantly , greater percentage of SSc patients had reduction of (≤ 2.5) CFR compared to controls (48% vs 4.5%, p=0.003). Left ventricular mass and ejection fraction were not statistically different in the two groups. A non-significant trend between mean CFR and the severity and duration of the disease was also observed.
Conclusion. In this cross-sectional study we demonstrated that CFR is early reduced in patients with SSc and seems to be correlated to the extension of the cutaneous subset of the disease. A reduction of CFR could be an early sign of cardiac involvement in systemic sclerosis.

1158-149 Clinical Course of Dilated Cardiomyopathy in Asymptomatic Patients Long-Term Treated With Beta-Blocking Agents: The Heart Muscle Disease Registry of Trieste

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No conclusive data are available on long-term effects of adding a beta-blocker (BB) to ACE-inhibitor (ACE-I) therapy in asymptomatic patients with dilated cardiomyopathy (DC).
Among 447 DC patients consecutively enlisted in the Heart Muscle Disease Registry of Trieste between 1986 and 2000, 307 (68.7%) had HF symptoms (NYHA II-IV, Group 1) while 140 (31.3%) were asymptomatic (NYHA I, Group 2) at enrolment. In Group 2, a previous history of HF was present in 71 patients (50.7%)(Group 2a) and absent in 69 (49.3%)(Group 2b).