1136-76   **Pregnancy Associated Cardiomyopathy: Clinical Profile in 137 Patients Diagnosed in the United States**

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Background: Pregnancy associated cardiomyopathy (PACM) is an uncommon, but some times fatal form of heart failure. Because of the rarity of PACM and geographical differences in its presentation, the clinical profile of this condition has not been clearly defined. **Methods:** We reviewed records of 137 patients with PACM, either referred to our heart failure program or obtained by a national survey. **Results:** Clinical profile: Age-16-43 years (mean 30 ± 6); Ethnic background-Caucasians 66%, Blacks 21%, Hispanics 10%, others 3%; Gravity-1-11 (mean 2.6 ± 2.2); Index pregnancy-1st - 51%, 2nd - 20%, 3rd - 20%, 4th - 12%, 5th or more – 17%; Duration of pregnancy-20-42 weeks (mean 36 ± 5); Mode of delivery-vaginal - 50%, cesarean - 49%, abortion - 1%. Associated Conditions: There was a strong association between PACM and history of hypertension during pregnancy (56%), use of tocolytic therapy (29%) and twin pregnancy (31%)
Left ventricular ejection fraction (LVEF): LVEF at time of diagnosis was 30± 12%, 43± 15% at 6 months follow up and 45± 15% during last follow-up at an average of 26 months. Normalization of LVEF (>50%) was observed in 54% of cases. This occured mostly within the 1st 6 months and was more likely in Caucasians, older patients (≥ 30 yrs), patients with gestational hypertension, and those with LVEF >30 % at diagnosis. Death, transplantation and AICDs: Death was reported in 12 patients between delivery day and 9 years postpartum. 6 of these patients died suddenly. 5 patients had heart transplantation and 3 AICD implantation. **Conclusion:** 1. Pregnancy associated cardiomyopathy in the US can occur at any age and in various ethnic groups. 2. PACM is related to 1st or 2nd pregnancy in almost 60% of cases. 3. There is a strong association between PACM and hypertension, use of tocolytic therapy and twin pregnancy. 4. Normalization of LVEF occurs in approximately half of the patients usually within first 6 months postpartum. 5. Recovery of LV function is more likely in Caucasians, patients > 30 years old, history of elevated blood pressure during pregnancy and EF >30% at time of diagnosis.

1136-77   **A Three-Month Weight Decrease Independently Predicted Increased Risk of Mortality and Heart Failure Hospitalization but Decreased Risk of Recurrent Myocardial Infarction in Patients With Acute Myocardial Infarction Complicated by Cardiac Failure**

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Background: The prognostic impact of body weight and weight change has been little examined in patients after acute myocardial infarction (AMI).
Methods: In 5477 patients with AMI and clinical signs of heart failure (HF) and/or systolic left ventricular dysfunction and/or anterior Q-waves, we assessed baseline body mass index (bBMI), weight change at 3 months (3-m WC), and several baseline variables comprising demographics, patient history, physical examination, laboratory values and medication. Median follow-up from 3 months was around 1,000 days. Patients were categorized into four groups according to bBMI. 3-m WC was defined as WC (+/-) >0.1 kg/bBMI-unit. The value of 3-m WC to predict total mortality, cardiac death, HF hospitalization, and recurrent AMI was tested in uni- and multivariate Cox proportional hazards models.
Results: 4541 patients had complete 3-m WC data. During follow-up there were 503 deaths, 318 cardiac deaths, 286 HF hospitalizations and 351 recurrent AMIs. In univariate analysis, relative to stable weight, 3-m decreasing weight was significantly predictive of death (HR 1.473, 95% CI 1.210-1.794, p<0.0001), cardiac death (HR 1.401, 1.093-1.797, p=0.008), and HF hospitalization (HR 1.459, 1.122-1.897, p=0.005). However, decreasing weight was borderline significantly protective of recurrent AMI (HR 0.788, 0.604-1.028, p=0.079).
In multivariate analysis, stratified for bBMI-group, adjustment was done for baseline covariates including age, sex, smoking, blood pressure, pulse rate, S-glucose, S-creatinine, cholesterol, triglycerides, hemoglobin, and history of diabetes, hypercholesterolemia, and AMI, and in-hospital treatment with aspirin, betablockers, diuretics, statins, and thrombolytics. Relative to stable weight, 3-m weight decrease was independently predictive of increased risk of mortality (p=0.0236) and HF hospitalization (p=0.0373), but of decreased risk of recurrent AMI (p=0.0452).
Conclusion: In a high risk post AMI population a 3-m body weight decrease was independently predictive of increased risk of all cause mortality and HF hospitalization, but independently predictive of decreased risk of recurrent AMI, in this multivariate model.

1136-78   **Brain Natriuretic Peptide and N-Terminal Brain Natriuretic Peptide in the Diagnosis of Heart Failure in Patients With Acute Shortness of Breath**

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Background: Plasma brain natriuretic peptide (BNP) is useful in differentiating heart failure (HF) from other causes of dyspnea. The N-terminal component (N-BNP) has a longer half-life, and increases in HF are proportionately greater. Methods: In 205 acutely dyspneic patients we assessed the utility of BNP and N-BNP (and compared local and commercial assays) for the diagnosis of HF. BNP was assayed with a point of care test (Biosite Diagnostics, California) and two locally developed radioimmunoassays, one ("clinical BNP") has a short incubation time for more rapid results than the other ("research BNP"). N-BNP was analysed with a local ("local N-BNP") and a commercial assay (Roche Diagnostics, Germany). HF diagnosis was adjudicated by two cardiologists using all information except hormone assays. Results: HF patients (n=70) had

higher mean levels of each hormone by all assays (p<0.001 for all). Results of all assays correlated closely (r values ranging between 0.902 and 0.975). The table shows the performance of optimal hormone values for diagnosis of HF (from receiver-operating-characteristic (ROC) analysis). In multivariate analysis hormones by any assay remained independently predictive of HF (p<0.001 for all). Conclusions: BNP or N-BNP are useful in the diagnosis of HF in acutely dyspneic patients, providing additional power over clinical and radiological data. Sensitivity was best with the Biosite BNP assay. Specificity and positive predictive value were greatest with N-BNP assays.

	Optimal Value	Sensi tivity	Speci ficity	Positive Predictive Value	Negative Predictive Value	Area Under ROC Curve	Accuracy
Biosite BNP	204pg/ml	94	70	62	96	0.88	78
Clinical BNP	44pmol/L	88	82	69	94	0.89	84
Research BNP	33pmol/L	87	82	71	92	0.90	83
Roche N-BNP	329pmol/L	82	87	76	90	0.89	85
Local N-BNP	238pmol/L	83	89	79	91	0.91	87

1136-79   **Significance of Left Atrium Dimension and Pulmonary Veins Flow Parameters for the Detection of Severe Diastolic Dysfunction**

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Background: Since the occurrence of pseudonormalization assessment of diastolic function (DF) limited to mitral inflow pattern is often difficult. The routine incorporation of other classic echocardiographic parameters can be of great value for correct diagnosis. We aimed to compare left atrium (LA) dimension and pulmonary veins flow (PVF) between patients (pts) with normal and pseudonormal or restrictive mitral inflow pattern and assess their diagnostic value for detection of severely impaired DF. Methods: Among 60 patient after myocardial infarction examined by transthoracic echocardiography with assessment of diastolic function we selected 20 pts with pseudonormal or restrictive mitral inflow pattern, (mean age 57.1±11.9, 18 male) and compared them with demographically paired controls (20 healthy persons, mean age 56.6±9.9, 18 male). PVF was recorded by pulsed wave Doppler in right upper pulmonary vein. Sensitivity, specificity, positive predictive value, negative predictive value and accuracy were calculated for LA>4.2 cm, atrial reversal velocity (Ar vel)>35 cm/s, difference between duration of PV atrial flow and mitral atrial flow (ΔAt)>30 ms and S/D ratio <1. Results: In group with severely impaired DF LA was distinctly larger: 4.7±0.4 vs 3.8±0.4 cm; p<0.001, diastolic PVF (D): 0.58±0.2 vs 0.43±0.1 m/s; p =0.005, and atrial reversal duration (Ar t): 181±28 vs 130±17 ms significantly greater, systolic PVF (S) and systolic to diastolic ratio (S/D) diminished: 0.37±0.1 vs 0.58±0.1 m/s; p<0.001 and 0.7±0.3 vs 1.4±0.3; p4.2 cm sensitivity, specificity, positive predictive value, negative predictive value and accuracy were: 95, 90, 91, 95, 93% respectively. For Ar vel>35 cm/s, (ΔAt)>30 ms and S/D<1 these values were: 50,85,77,63,63% , 70,100,100,77,85% and 85, 85, 85, 85, 85% respectively.
Conclusions: LA dimension and PVF parameters are useful in detection of severely impaired DF and may have potential in differentiation between normal and pseudonormalized pattern. Cutoff values above 4.2 cm for LA, 35 cm/s for Ar vel, S/D below 1 and duration of Ar t longer than 30 ms in comparison with mitral atrial flow showed very high specificity for diagnosis of severe diastolic dysfunction.

1136-80   **Long-Term Follow-Up on the Morbidity and Mortality of Patients Hospitalized for Heart Failure With a Normal Ejection Fraction**

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Background: Patients hospitalized for heart failure (HF) with a normal left ventricular ejection fraction (LVEF) are predominantly elderly women with a history of hypertension, LVH, diabetes and coronary artery disease. The long term outcomes of these patients after hospitalization are less well defined.
Methods: Patients hospitalized for decompensated HF as evidenced by pulmonary congestion on admitting chest xray and volume overload on physical exam in the presence of a normal LVEF were eligible. Patients who survived the index admission were prospectively followed and data on recurrent hospitalization and death were collected.
Results: 193 patients (139 women, 54 men) were followed for a mean of 1.8 years. The mean age was 71.7 years. 46% had coronary artery disease and 45% were diabetic. 80% of patients had symptoms at baseline consistent with NYHA functional class II-III (10% class I, 10% class IV). 64 deaths occurred with an annualized mortality of 18.2%. The annualized re-hospitalization rate was 79% (graph).
Conclusion: Patients hospitalized for HF with a normal LVEF have significant long term morbidity and mortality. The mortality rate exceeds that generally reported in NYHA class II-III systolic dysfunction HF patients and probably reflects the presence of significant co-morbidities in these patients including advanced age. The annualized re-hospitalization