Responders to CRT receiving endovascular LV lead (figure1). Conclusion: The magnitude of clinical and echocardiographic response is better with robotic epicardial left ventricular lead compared to endovascular implantation in responders to Cardiac Resynchronization Therapy. This observation likely stems from flexibility of lead placement at latest activation site of left ventricle by robotic method.

Treatment-Induced Changes of BNP in Patients with End-Stage Heart Failure Predict Their Outcome
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Background: Intermittent inotropic infusions improve the clinical condition of patients with end-stage congestive heart failure (CHF). Brain natriuretic peptide (BNP) is a reliable prognostic factor for the survival of patients with CHF. The aim of the present study was to evaluate the probable prognostic value of changes in BNP regarding the outcome of patients treated with intermittent inotropic infusions. Methods: Fifteen patients with compensated CHF refractory to standard medical treatment were treated with oral amiodarone and intermittent inotropic infusions for 8 hours every week for a period of 6 months. BNP measurements were performed before the initiation of the first infusion, and were repeated before the initiation of the fourth. Changes in BNP levels were correlated with the clinical outcome. Results: All patients were in New York Heart Association class IV at baseline, with a left ventricular ejection fraction (LVEF) of 21.2 ± 5.1% and mean pulmonary capillary wedge pressure (PCWP) of 28.6 ± 5.9 mmHg. The change in BNP values ranged from −3790 ng/dl to +2825 ng/dl. The median value of the BNP change (−282 ng/dl) was used to distinguish patients with a significant reduction of BNP values (Group I, n = 7, ranged from −3790 to −700) from those with a modest reduction or increase in BNP (Group II, n = 8, ranged from −24 to +3525). After 3 months of therapy, LVEF remained unchanged in both groups (from 19.2 ± 6.5% at baseline to 22 ± 8.7% at three months, p = 0.182, in Group I and from 21.8 ± 4.1% to 24 ± 6.3% in Group II, p = 0.149) and PCWP was significantly improved (from 30.3 ± 4.9 mmHg to 19.2 ± 5.7 mmHg, p = 0.024 for Group I, and from 28.3 ± 7.6 mmHg to 22.1 ± 7.6 mmHg, p = 0.036 for Group II). The estimated probability of survival was 85.7% for Group I versus 12.5% for Group II, p = 0.0175. Mean survivals were 20.9 and 9.8 months, respectively. Conclusion: Significant BNP reduction after 4 weeks of treatment predicts a favorable outcome for patients with refractory end-stage CHF treated with intermittent inotropic infusions.

Prognostic Value of Tissue Doppler Derived Tei Index after Experimental Myocardial Infarction
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Background: It has been reported that tissue Doppler imaging (TDI) derived Tei index, defined as the sum of isovolumetric contraction and relaxation time divided by ejection time, is a valuable tool in assessing combined systolic and diastolic function with a better reproducibility than pulsed Doppler Tei index. Therefore, we hypothesized that early measurement of TDI Tei index could provide prognostic survival information beyond standard systolic and diastolic echo parameters on an animal model of acute myocardial infarction (AMI). Methods: In 64 adult consecutive mice (CB57/BL6, age 10–12 weeks, weight 22.7 ± 3 g) a large AMI was created by proximal LAD ligation. Echocardiography (Sequioa 512, Acuson) was performed 48 ± 7 hours after surgery. Left ventricular (LV) diastolic (LVED) and systolic (LVES) dimensions, LV fractional shortening (LVFS), LV ejection fraction (LVEF), LV wall motion score index (WMSI), LV E/A ratio and LV TDI Tei index were measured using a 15 MHz transducer. The smallest TDI sample volume was placed at the level of the lateral side of the mitral annulus in parasternal long axis view. Systolic (S'), early (E') and late (A') diastolic myocardial velocities were recorded from the annulus site. TDI Tei index was calculated as TI = (a−b)/b where a is the time interval from the end of Aa wave to the onset of Ea wave and b the time from the onset to the end of S' wave. Results: High operative mortality rate of this model (12.5%) was correlated to AMI. During a follow-up of 165 ± 11 days, 8 mice (14.28%) died. TDI Tei index was significantly lower in survivors than in deceased mice (0.47 ± 0.09 versus 0.83 ± 0.12, p < 0.001). Mortality rate was significantly higher in mice with highest Tei index values (>0.15) p < 0.001. In a stepwise multivariate Cox proportional-hazard analysis including the different indices of cardiac function that were found to be independent predictors of cardiovascular mortality in the univariate analyses, a high TDI Tei index remained a significant predictor above LVEF, LV WMSI and E/A ratio (chi-square = 7.9, p = 0.003). Conclusions: Our data suggest that early assessment of TDI Tei index is a powerful predictor of mortality after AMI in mice and provides important prognostic information beyond other measurements of cardiac function.

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Correlation between Body Mass Index and Survival Varies with Etiology of Heart Failure
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Background: There are recent reports suggesting that increased body-mass index (BMI) in patients with CHF is protective in terms of survival. Whether BMI has the same prognostic value among specific underlying causes of cardiomyopathy is unknown. Using a diverse cohort of cardiomyopathy patients, we analyzed the correlation between BMI and survival among different etiologies of heart failure. Methods: From January 1982 to December 1997, all CHF patients who underwent endomyocardial biopsy at a single academic center were entered into a prospective database. We analyzed the three most common CHF etiologies. Orthotopic heart transplant recipients were excluded. We used Cox-proportional survival analysis to evaluate the relationship between BMI and survival. Results: 861 patients with infiltrative heart disease (154), idiopathic cardiomyopathy (500) and myocarditis (207) are included. The overall age was 49 ± 14, 64% men and 64% Caucasian. Upon presentation systolic blood pressure (SBP) was 124 ± 25 and heart rate 88 ± 19. The BMI was 27.1 ± 7, higher in the group with idiopathic cardiomyopathy (27.9 ± 7.4) versus infiltrative heart disease (26.7 ± 6.1) or myocarditis (25.6 ± 6.5). A Cox-proportional survival model was constructed including age, sex, race, BMI and SBP. BMI was shown to have an inverse correlation with survival for infiltrative heart disease (per 5 units increase HR: 0.72; 95% CI 0.55–0.95, p = 0.01) but not in the group with idiopathic cardiomyopathy (per 5 units increase HR: 0.75; 95% CI 0.6–0.95, p = 0.01) and not in the group with infiltrative heart disease (per 5 units increase HR: 0.99; 95% CI 0.89–1.09, p = 0.8). Analyzing the entire cohort, BMI was shown to have a significant inverse correlation with survival (per 5 units increase HR: 0.72; 95% CI 0.55–0.95, p = 0.01). In our study, BMI is inversely correlated with CHF survival in patients with infiltrative heart disease and myocarditis but not with idiopathic dilated cardiomyopathy. This finding may reflect different activation levels of the inflammatory cascade or neurohumoral pathways in various CHF etiologies.