the curve for segmental contractile recovery were: 0.65 and 0.57 for de-CMR and 2D-GLS, respectively.

**Conclusions:** 2D and 3D strain parameters obtained by a pre-discharge echocardiogram show a good correlation with the global amount of scar area after a re-canalized STEMI as detected by de-CMR. The accuracy of both echo- and CMR techniques to predict the contractile recovery at 1-year follow-up is limited.

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**P2718 | BEDSIDE**

Global longitudinal strain at baseline is a marker of ventricular arrhythmias in patients with cardiac resynchronization therapy

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**Purpose:** Pre-implant predictors of ventricular arrhythmia (VA) are not fully investigated in patients receiving cardiac resynchronization therapy (CRT). A sensitive marker of VA in these patients will be valuable for correct choice of CRT type, with or without a cardioverter defibrillator (CRT-D). We aimed to explore if assessment of left ventricular (LV) function by speckle tracking strain echocardiography could predict VA in heart failure patients eligible for CRT.

**Methods:** We investigated heart failure patients with left bundle branch block treated with CRT. Echocardiography was performed before CRT-implantation and after 6 months (CRT turned on). Systolic myocardial function was assessed as LV ejection fraction (EF) by Simpson biplane method and global longitudinal strain (GLS) using speckle tracking technique. VA was defined as non-sustained ventricular tachycardia or appropriate anti-tachycardia pacing or shock during 2 years follow-up after CRT/implantation.

**Results:** We included 73 heart failure patients (NYHA class 2.8 ± 0.4, EF 28 ± 9%), 44% with ischemic and 56% with non-ischemic dilated cardiomyopathy. LV function by GLS was lower in patients with VA compared to those without VA during 2 years follow-up, both at baseline (-6.3 ± 4 vs. -8.8 ± 4%, p < 0.03) and at 6 months (-5.9 ± 6 vs. -7.7 ± 5%, p < 0.01). EF was not amarker of VA during 2 years follow-up, neither at baseline (26.6 ± 10 vs. 29 ± 9%, p = 0.26) nor at 6 months (36.8 ± 4 vs. 41 ± 12%, p = 0.18).

**Conclusions:** In our study LV function by GLS was a marker of subsequent VA in heart failure patients receiving CRT, while EF was not. Our results suggest that EF measurement alone is not adequate for risk prediction of VA. Assessment of GLS might be considered as part of decision making for correct choice of CRT.

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**CONQUERING COMORBIDITIES IN HEART FAILURE**

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**P2727 | BEDSIDE**

Diabetes mellitus influences left ventricular and arterial stiffness in patients with suspected coronary artery disease

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**Background:** Increases in effective arterial elastance (Ea) and ventricular end-systolic elastance (Ees) may contribute to heart failure with preserved ejection fraction (HFpEF). The aim of this study was to determine whether the increases in vascular and/or left ventricular (LV) stiffness were associated with diabetes independently of age gender and hypertension in patients who were suspected as having coronary artery disease.

**Methods and results:** We analyzed 2,025 consecutive angiography reports from patients undergoing conventional catheterization for clinical indications between 2006 and 2012. Of these, patients with EF lower than 50% were excluded: totally 960 patients were enrolled. Ea and Ees were estimated using the pressure-volume loop definition from invasive aortic pressure and LV end systolic or diastolic volume assessed by left ventriculography. The associations of arterial and ventricular elastance with diabetes were examined using the multivariable linear regression model. The mean age was 67.2 ± 9.8 years, and the mean EF was 64.6 ± 8.2%. Of the study patients, 37% had diabetes mellitus, 78% had hypertension, and 17% had neither disease. In the multivariable linear regression models, diabetes mellitus was associated with greater Ea (0.260 mmHg mL⁻¹ vs. non-diabetes, p = 0.00) and Ees (0.517 mmHg mL⁻¹ vs. non-diabetes, p < 0.00) after the adjustment for age, gender hypertension and the number of coronary artery stenoses.

**Conclusions:** Diabetes was associated with increasing systolic arterial and LV stiffness independently of age gender, hypertension and number of coronary artery stenoses. These data suggested that arterial-ventricular stiffness might contribute to the natural history of HFpEF in the diabetes mellitus individuals regardless of visible coronary stenosis.

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**P2728 | BEDSIDE**

Is the blood pressure paradox observed in all heart failure patients?

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**Background:** Heart failure (HF) patients with higher systolic blood pressure (SBP) appear to have a survival benefit. Diabetes mellitus (DM) is a frequent comorbidity in HF. Blood pressure control is a major goal in patients with HF. We aimed to study if the 6-month HF mortality predicted by low admission SBP in patients hospitalized due to acute HF was different according to DM history.

**Methods:** We prospectively recruited 569 patients admitted due to acute HF, whether de novo or worsening HF. Both patients with left ventricular systolic dysfunction and those with HF with preserved ejection fraction were studied. DM was defined according to the 2011 American Diabetes Association recommendations. Medication and timing of discharge were at discretion of the attending physician. Admission clinical characteristics, and discharge laboratory and medication were recorded. Patients were followed for a 6-month period. The endpoint under study was HF death. Diabetic and non-diabetic patients were compared.

The effect of SBP was assessed according to two categories using the cut-off of 115 mmHg (1st quartile), Interaction between DM and SBP was tested. A multivariate Cox-regression model was used to assess the prognostic impact of lower SBP. A stratified analysis according to DM was performed.

**Results:** Median patients’ age was 79 years and 44.3% were male. HF was ischemic in 235 (39.9%) patients and 44.7% had preserved ejection fraction. DM was present in 50.8% of the patients. Ischemic aetiology HF and hypertension were more common in diabetics. Diabetic patients had worse renal function, lower total and HDL cholesterol and were more often discharged with antiplatelet therapy and on statin. During follow-up, 89 patients died due to HF; 45 non-diabetics and 44 diabetics. In the whole group of 569 patients, an admission SBP < 115mmHg associated with 6-month HF death with an HR of 2.27 (95% CI: 1.49-3.47); however, this association of lower pressure with shorter survival was only reproduced in the subgroup of non-diabetic patients. The multivariate-adjusted HR for 6-month HF death in non-diabetic HF patients with an admission SBP <115mmHg was 2.94 (95% CI: 1.49-5.79); while a lower admission SBP was not associated with HF mortality in the subgroup of diabetic patients, p for interaction = 0.04.

**Conclusions:** The blood pressure paradox in HF is only observed in HF patients without concomitant DM. Diabetic patients seem to be a particular subgroup of HF patients with yet to define specificities in care.

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**P2730 | BEDSIDE**

Treatments with angiotensin converting enzyme inhibitors and beta blockers for preventing disease dysfunction in patients with Duchenne/Becker muscular dystrophy

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**Background:** Duchenne muscular dystrophy (DMD)