GW28–e0318 FACTORS ASSOCIATED WITH SUPER–RESPONSE TO CARDIAC RESYNCHRONISATION THERAPY

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all p<0.01]. It was found that LVMI, MWS has a positive correlation with the level of Galectin-3 and Soluble ST2 (LVMI and Galectin-3, SolubleST2 r=0.6352 and 0.7081, MWS and Galectin-3, SolubleST2 r=0.5907 and 0.4659 respectively, all P<0.01).

CONCLUSIONS The changes LVMI and MWS were more related to higher level of Galectin-3 and Soluble ST2. At high altitude, increasing in the level of Galectin-3 and Soluble ST2 with increasing altitudes lead to severe abnormalities of ventricular remodeling in Chand correlated with the severity degree of ventricular remodeling in CHF.

GW28-e0286
Heart failure incidence following percutaneous coronary intervention in patients with myocardial infarction type 2

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OBJECTIVES To evaluate the incidence of new onset heart failure (HF) in patients with myocardial infarction type 2 who underwent percutaneous coronary intervention (PCI) and compare it with the patients without revascularization during 6 months after discharge.

METHODS 1240 patients with acute coronary syndrome (ACS) were examined. Myocardial infarction type 1 (T1MI) was identified in 63.9% patients, myocardial infarction type 2 (T2MI) came up in 23.9% cases. Patients with T2MI were older (71,2±10,5 vs 60,15±11,9 P<0.001) and predominantly women (52.8% vs 42% P<0.001) as compared to T1MI patients. Those patients who had not undergone coronary angiography procedure and patients with non-obstructive coronary atherosclerosis were excluded from the 6 months survey that followed.

RESULTS Factors which caused disequilibrium in the myocardial balance between oxygen supply and its demand in patients with T2MI were distinguished. The dominant one was arterial hypertension (systolic blood pressure > 180 mm Hg) combined with left ventricular hypertrophy identified by echocardiogram (41.6%), tachy- and bradyarrhythmia (heart rate more than 130 and less than 40 bpm) came up in 26.0% cases, severe anemia (Hemoglobin < 5.5 mmol/l for men and < 5.0 mmol/l for women) - in 21.8%, severe respiratory failure (arterial oxygen tension less than 8 kPa) - in 6.4% patients. Two or more factors were detected in 5.2% cases. No other causes were identified. 74.4% patients with T2MI underwent diagnostic coronary angiography. PCI was performed in 39.7% cases. One coronary vessel obstruction was found in 11.4% patients, two vessels obstruction came up in 7.3%, three and more vessels were affected in 47.9%. In 33.4% cases patients demonstrated non-obstructive coronary atherosclerosis. 6 months survey that followed has shown a significant difference in heart failure manifestation between T1MI and T2MI patients (14% vs 21% respectively, P=0.02). Permanent diuretic requirement was found in 10.2% T1MI vs 31.3% T2MI patients (P=0.009). In PCI T2MI group new onset heart failure symptoms were found in 40% patients vs 44% patients in no-PCI T2MI group (P>0.05). Furthermore, there was no significant difference in III-IV NYHA discovered in these two groups (47.1% vs 53.1% respectively, P>0.05).

CONCLUSIONS Six months survey showed no significant difference in new onset HF symptoms between PCI and no-PCI patients with T2MI.

GW28-e0317
Long-term mortality in patients with congestive heart failure treated with cardiac resynchronization therapy

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OBJECTIVES To analyze the relationship between clinical, functional parameters, response to CRT and long-term mortality in patients with congestive heart failure (CHF) treated with CRT.

METHODS 85 CRT patients (mean age 55.1±9.9 years, 81.2% men) with CHF (53% ischemic and 47% non-ischemic etiology) II-IV NYHA functional class were enrolled. At baseline, 1month, 3 months and each 6 months after implantation we evaluated clinical and echocardiographic parameters. Response to CRT was evaluated as the best decrease of left ventricular end-systolic volume (LVESV) (follow-up period 28.9±27.8 months). According to long-term outcome patients were divided into: I group - survived patients (n=47) and II group - died patients (n=38).

RESULTS Percentage of super-responders (decrease of LVESV≥30%) significantly differed between groups (38.3% in I group vs 7.9% in II group; p=0.001). In survived patients female gender (p=0.020),

history of myocardial infarction (MI) (p=0.005) were observed more frequently, also in this group LVESV (p<0.001) and left ventricular end-diastolic volume (p=0.001) were higher, PR interval was longer (p=0.001), left ventricular ejection fraction (LVEF) was lower. Presence of LBBB and width of QRS complex did not differ between groups.

Cox regression showed that LVESV (HR 1.012; 95% CI 1.006-1.018; p<0.001), PR interval (HR 1.012; 95% CI 1.005-1.020; p=0.001) and absence of prior MI (HR 0.332; 95% CI 0.161-0.683; p=0.003) were associated with long-term mortality.

CONCLUSIONS Super-response to CRT is associated with better survival in long-term period. LVESV, history of MI and PR interval can be used as independent predictors of long-term mortality but not LBBB.

GW28-e0318
FACTORS ASSOCIATED WITH SUPER-RESPONSE TO CARDIAC RESYNCHRONISATION THERAPY

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OBJECTIVES To evaluate potential parameters related with super-response to CRT.

METHODS 60 CRT patients (mean age 54.3±9.8 years; 80% men) with congestive heart failure (CHF) II-IV NYHA functional class were enrolled. At baseline, 1 month, 3 months and each 6 months after implantation clinical, electrocardiographic and echocardiographic parameters, NT-proBNP level were evaluated. According to the best decrease of left ventricular end-systolic volume (LVESV) (mean follow-up period 33.7±15.1 months) patients were classified as super-responders (SR) (n=28; reduction in LVESV ≥30%) and non-SR (n=32; reduction in LVESV <30%).

RESULTS At baseline groups differed in age (58.1±5.8 years in SR vs 50.8±11.4 years in non-SR; p=0.003), gender (female gender 32.1% vs 9.4% respectively; p=0.028), width of QRS complex (157.6±40.6 ms in SR vs 137.6±33.9 ms in non-SR; p=0.044). Percentage of LBBB was equal between groups (75% in SR vs 59.4% in non-SR; p=0.274). All parameters of mechanical dyssynchrony were higher in SR, but only difference in left ventricular pre-ejection period (LVPEP) was statistically significant (153.0±35.9 ms vs 129.3±28.7 ms p=0.032). NT-proBNP level was lower in SR (1581±1369 pg/ml vs 3024±2431 pg/ml; p=0.006).

The survival rates were 100% in SR and 90.6% in non-SR (log-rank test P=0.002). Multiple logistic regression analysis showed that LVPEP (HR 1.024; 95% CI 1.004-1.044; P = 0.017), baseline NT-proBNP level (HR 0.628; 95% CI 0.414-0.953; P=0.029) and age at baseline (HR 1.094; 95% CI 1.009-1.168; P=0.30) were independent predictors for CRT super-response. ROC curve analysis demonstrated sensitivity 71.9% and specificity 82.1% (AUC=0.827; p<0.001) of this model in prediction of super-response to CRT.

CONCLUSIONS Super-response to CRT is associated with better survival in long-term period. Presence of LBBB was not associated with super-response. LVPEP, NT-proBNP level and age at baseline can be used as independent predictors of CRT super-response.

GW28-e0434
The clinical significance of serum trimethylamine N-oxide (TMAO) level in patients with chronic heart failure

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OBJECTIVES Myocardial metabolism and energy expenditure change during the process of heart failure, which also aggravate the pathophysiology of heart failure. It has been reported that intestinal microbe-generated metabolite trimethylamin N-oxide(TMAO) had a relationship with the development of cardiovascular disease. We intend to test the plasma TMAO level in patients with chronic heart failure and observe the relationship between TMAO and the myocardium metabolic biomarker alpha ketoglutarate(α-KG) and myocardial energy expenditure (MEE).

METHODS 84 patients hospitalized in cardiovascular department of Nanfang Hospital of Southern Medical University from July 2016 to