RESULTS Participants with prehypertension exhibited more obese features (body mass index, 25.1±3.7 vs. 24.3±3.6kg/m2; p<0.001). The laboratory findings demonstrated higher levels of the fasting glucose (103.8±26.0 vs. 97.2±21.6mg/dL, p=0.007), HOMA-IR (1.18±0.87 vs. 0.87±0.55, p<0.001), uric acid (6.0±1.4 vs. 5.4±1.3mg/dL, p<0.001), and triglycerides (123.1±87.9 vs. 101.3±59.7mg/dL, p=0.005) in pre-hypertension subjects. They also had a higher LV mass index (84.5±16.7 vs. 76.2±14.4g/m2, p<0.001) and E/e', and lower LV ejection fraction, but the latter two were not statistically significant. However, no significant difference in the exercise capacity was noted between the two groups (peak VO2; 28.3±7.7 vs. 27.9±6.9mL/kg/min, p=0.616). A multivariate linear regression analysis demonstrated that the age (β=-0.142, p<0.001), muscle mass (β=0.429, p<0.001), and fat mass (β=-0.361, p<0.001), but not the value of the blood pressure, were independent determinants of the exercise capacity in these subjects.

CONCLUSIONS Our observations demonstrated that prehypertension was associated with a metabolic disorder and preclinical end-organ damage, but not with the exercise capacity.

GW27-e0527

Biomarkers and In-Hospital Death in Patients with Stanford type A Acute Aortic Dissection

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OBJECTIVES The present study aimed to investigate the predictive value of various biomarkers for in-hospital mortality of patients with Stanford type A acute aortic dissection (AAD).

METHODS This retrospective study included 67 consecutive patients admitted to our hospital for Stanford type A AAD. Patients were divided into two groups: the deceased group (n = 26), consisting of those who died during hospitalization, and the survived group (n = 41). Baseline data including sex, blood pressure, aortic diameter (calculated by computed tomography measurement), surgical management, troponin I (TnI) (associated with myocardial injury), white blood cell (WBC) count (a marker of inflammation), N-terminal pro-brain natriuretic peptide (NT-proBNP) (associated with left ventricular dysfunction), fragmented QRS complex (fQRS) (an index of adverse cardiovascular events), and fibrin D-dimer (an index of thrombogenesis) were collected. The data on in-hospital mortality were analyzed.

RESULTS The deceased group had significantly higher admission systolic blood pressure (SBP), aortic diameter, TnI, WBC counts, and NT-proBNP levels and higher rate of fQRS(+) than the survived group. Admission SBP, aortic diameter, WBC count, TnI, and D-dimer were found to be independently related with in-hospital death by multivariate logistic regression analysis. Elevated D-dimer, fQRS(+), NT-proBNP, TnI, and WBC count had a sensitivity of 96.2% and specificity of 85.4% for the prognosis of in-hospital death of Stanford type A AAD patients.

CONCLUSIONS Admission SBP, aortic diameter, TnI, WBC count, and D-dimer were important risk factors and independently associated with in-hospital death of Stanford type A AAD patients. Biomarkers including TnI, WBC count, fQRS, fibrin D-dimer, and NT-proBNP have a strong predictive value for in-hospital mortality in patients with Stanford type A AAD, with a worse outcome for those with highly elevated biomarkers.

GW27-e0555

Ratio of split renal function difference-a new indicator for identifying the early renal damage in patients with essential hypertension

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OBJECTIVES Calculating ratio of split renal function difference from separate renal glomerular filtration rate (GFR) measured by 99mTc-DTPA renal imaging, then evaluate the clinical value on the diagnosis of early renal damage in patients with essential hypertension. It may provide a new indicator for evaluating the early renal damage in patients with essential hypertension.

METHODS 29 patients essential hypertension [aged 58.8±14.5 yr; 253 males, 276 females] were selected from the patients hospitalized in the fifth division of cardiovascular department in the second hospital of Dalian Medical University from January 2014 to November 2015. All patients were divided into normal group and increased group

according to whether elevation of Scr and/or BUN. Also, according to the Q value, all patients were again subgrouped into Q value < 5%, 5% ≤Q value < 10%, Q value≥10% three groups. The correlation between Q value and sex, age, course of disease, BMI, systolic blood pressure (SBP), diastolic blood pressure (DBP), Scr, BUN, CysC, GFRT, Sβ2-MG, Uβ2-MG and 24hMAU, respectively, was analyzed. Receiver operating characteristic curve (ROC) was used to evaluate the cut off value of Q as a diagnostic indicator for the early renal damage in patients with essential hypertension.

RESULTS Q value in Scr and/or BUN increased group(10.6±9.8)%was significantly higher than that in Scr and BUN normal group(6.5±6.0)% (P < 0.01). Scr, BUN and CysC in Q value ≥10% group were significantly higher than those in Q value < 5% group and 5% ≤Q value < 10% group (P < 0.01). GFR in Q value ≥10% group were significantly lower than that in Q value < 5% group and 5% ≤Q value< 10% group (P < 0.01). Sβ-MG in Q value ≥10% group were significantly higher than that in Q value < 5% group and 5% ≤Q value < 10% group(P < 0.05). 24hMAU in Q value≥10% group were significantly higher than that in Q value < 5% group (P < 0.05). Liner correlation analyse suggest Q value had significant correlation with Scr, BUN, CysC,Sβ2-MG, Uβ2-MG, 24hMAU, GFRT and course of hypertension(P < 0.05). Multiple stepwise regression analysis suggest the CysC, Uβ2-MG and the course of hypertension were independent risk factors contribute to the elevation of Q value. According to ROC curve, to diagnose of early renal damage in patients with essential hypertension, the optimal critical value of Q was 11.04%, the sensitivity and specificity were 21% and 91%, respectively. The area under the ROC curve was 0.56.

CONCLUSIONS Ratio of split renal function difference may be used as a new diagnostic indicator for the evaluation of early renal damage in essential hypertension.

GW27-e0558

Hypertension and comorbidity. Reality clinical practice data.Compliance

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OBJECTIVES To identify the and average number of antihypertensive agents (AHA) administered for hypertensive patients (pts) with concomitant diseases in Novosibirsk town cardiologists practice and to compare this data with European Guidelines 2013.

METHODS The study included analysis of prescribing in 320 Hypertension Grade 1-3 pts (143 men and 177 women 36-77 years old) with concomitant coronary artery disease (CAD) - 104 pts; atrium fibrillation (AF) - 82 pts; heart failure (HF) II-III NYHA -51 pts; diabetes mellitus (DM) - 50 pts, and chronic obstructive lung disease (COLD) - 33 pts. Hypertension anamnesis duration constituted 18, 2±1, 1 years, concomitant diseases anamnesis duration - 5, 7±0, 8 years.

RESULTS More frequently administered AHA groups in CAD and AF pts were beta-blockers (BB) - 73, 1 and 68,2% and angiotensine-converting enzyme inhibitors/angiotensin receptor blockers (ACEI/ ARB) - 61,5 and 52,7%; in HF and COLD pts - diuretics (76,5 and 72,7%) and BB (72,6 и 54,6%); in DM pts - BB (74,0%) and diuretics (70,0%). Combined antihypertensive therapy was administered to 71-96% pts. In groups of pts with concomitant CAD, HF and DM more frequently administered combination of 4 numbers of AHA (31,7; 45, 1 and 26, 0% accordingly); in group of COLD pts - combination of 3 numbers of AHA (33, 3%), and in group of pts with concomitant AF more frequently administered combination of 2 numbers of AHA (29,0%). Coincidence of different groups AHA administration at real clinical practice with European Guidelines 2013 constituted 96, 0% in hypertension connected with HF and 91, 3% in hypertension connected with CAD and AF. On the background of 10-12th day of such therapy blood pressure control was achieved at 60, 6% CAD and COLD pts, at 62, 8% HF pts, at 64, 0% DM pts, and at 67, 9% AF pts. The most 6 month follow up compliance inherent to BB and ACEI/ARB. High compliance levels associated with marriage, education level, understanding of treatment benefice.

CONCLUSIONS Cardiologists more frequently administered for hypertensive pts with concomitant diseases BB, diuretics (thiasides, indapamid, torasemid), ACEI. Administration 3-4 agents for one patient was prevailed. Coincidence of different groups AHA administration at real clinical practice with European Guidelines 2013 more frequently applied ACEI and BB at hypertensives connected with CAD, HF, DM and AF. Such therapy promoted blood pressure control from 10-12th treatment day at 60, 6-67, 9% pts.