high density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C), hyper sensitive-C reactive protein (hs-CRP) and tissue inhibitor of metalloproteinase-1 (TIMP-1). The body fat composition and distribution, serum levels of inflammatory factors were also analyzed.

RESULTS Both the control group and disease group, the level of hs-CRP was significantly correlated positively with WC, BMI, WHR, A/G. The level of hs-CRP (3.4±1.37) mg/Lin the CHD group was significantly higher than the control group [(1.4±2.18) mg/L] (P <0.01). The levels of TIMP-1 have no significant deviation between the CHD group and the control group [(4.6±2.17) mg/mL vs. (5.1±16.50) mg/mL] (P = 0.21). In both groups, hs-CRP was significantly correlated with WC, BMI, WHR, A/G (P <0.05), the levels of TIMP-1 were not significantly correlated with BMI, WC, WHR, TF%, A/G, LDL-C, hs-CRP (all P >0.05).

CONCLUSIONS The accumulation of abdominal adipose tissue is closely correlated to higher hs-CRP. An extent of chronic inflammation might exist in obese person. The level of hs-CRP is significantly increased in the CHD group. However, There is no significantly correlation between serum TIMP-1 and the accumulation of abdominal adipose tissue.

GW26-e0235 Lipid among Patients Presented with Acute Myocardial Infarction Unstable Angina and Stable Angina Pectoris

Bin Kang, Qi Qian, Fei Du, Jinping Feng*
Tianjin Medical University; Tianjin Chest Hospital

OBJECTIVES The objective of this study is to understand the adequacy of lipid-lowering therapy in treating acute myocardial infarction (AMI) patients. Despite the ample evidence and guidelines to treat coronary artery disease (CAD) with lipid-lowering therapy, there have been concerns among physicians in treating patients of AMI who has lower level of serum lipid.

METHODS We analyzed 3245 CAD lipid profile dates collected from cardiology department in Tianjin Chest Hospital, China, retrospectively. Patient data were divided into three groups based the clinical characteristics. Statistical analyses were performed to provide the baseline lipid levels and clinical feature of AMI.

RESULTS The concentrates of total cholesterol (TC) are (183.1±37.9) mg/dl, (192.1±44.4) mg/dl and (213.8±46.8) mg/dl for groups AMI, unstable angina pectoris (UAP) and stable angina pectoris (SAP) respectively. The concentrates of low-density lipoprotein cholesterol (LDL-C) are (116.6±32.6) mg/dl, (118.8±39.4) mg/dl and (139.1±41.9) mg/dl for groups AMI, UAP and SAP respectively. The concentrates of high-density lipoprotein cholesterol (HDL-C) are (40.7±10.8) mg/dl, (45.4±11.9) mg/dl and (45.8±13.2) mg/dl for groups AMI, UAP and SAP respectively. The concentrates of white blood count (WBC) are (9.2±3.9) x 10^9/L and (7.0±2.2) x 10^9/L and (6.6±1.5) x 10^9/L for groups AMI, UAP and SAP respectively. The concentrates of ejection fraction (EF) are (56.2±9.2)%, (62.0±7.6) %and (62.8±8.0)% for groups AMI, UAP and SAP respectively. The above data suggests that TC, LDL-C and HDL-C serum level in AMI patients were the lowest among three groups, followed by UAP patient group and SAP patient group. There were significant differences in WBC and EF between three groups of patients. A good correlation was confirmed between EF% and the lipid. WBC did not correlate with the lipid except HDL-C. AMI is an acute inflammatory reaction that is accompanied by the change of lipid level.

CONCLUSIONS Although the level of TC, LDL-C and HDL-C are lower in AMI, and higher with WBC, it is maybe related to acute inflammatory reaction during the rupture of atherosclerotic plaques.

GW26-e2193 Renal insufficiency and mortality in coronary artery disease with reduced ejection fraction

Yong Peng, Tianli Xia, Wei Liu, Baotao Huang, Zhengang Zhao, Fangyang Huang, Chen Zhang, Yanbian Liao, Hua Chai, Xiaolin Luo, Qiao Li, Yunming Xu, Chi Chen, Qingtai Meng, Mao Chen, Dejia Huang Department of Cardiology, West China Hospital, Sichuan University, Chengdu, China

OBJECTIVES Despite the correlation between chronic renal insufficiency and cardiovascular disease has received longstanding attention, the impact of renal insufficiency on the risk of death in coronary artery disease (CAD) patients with reduced ejection fraction (EF) has not been well evaluated.

METHODS 2161 patients with CAD were enrolled and were grouped into 3 eGFR categories: >90 (n = 638), 60-90 (n = 1142), and <60 (n = 381) mL/min/1.73 m^2. Patients with EF > 50% or ≤ 50% were defined preserved EF (n = 1749) or reduced EF (n = 412), respectively. The end points were all-cause mortality and cardiac mortality.

RESULTS The average age was 64.59 ± 10.23 years and males accounted for 79.5% of patients. A total of 159 deaths (mortality rate: 7.4%) occurred during the follow-up period (an average of 30.97±11.70 months), including 81 cases (cardiac mortality rate: 3.7%) of cardiac death. Cumulative survival curves showed that in patients with reduced EF, renal insufficiency significantly increases all-cause mortality and cardiovascular mortality in a graded fashion (mortality rate, moderate or severe vs. normal: 29.3% vs. 5.4%, p < 0.001; cardiac mortality rate, moderate or severe vs. normal: 18.2% vs. 4.5%, p = 0.001, respectively). COX regression analysis showed that in CAD patients with reduced EF, moderate to severe renal insufficiency increased all-cause mortality by 6.10-fold (HR 6.10, 95% CI 2.50 to 14.87) and cardiac mortality by 4.10-fold (HR 4.10, 95% CI 1.51 to 11.13). Moreover, even mild renal insufficiency increased all-cause mortality by 2.59-fold (HR 2.59, 95% CI 1.07 to 6.28) and cardiac mortality by 2.22-fold (HR 2.22, 95% CI 0.83 to 5.95).

CONCLUSIONS This study has found that the damage caused by renal insufficiency in patients with CAD is closely related to cardiac function. In patients with reduced EF, renal insufficiency, even mild, would further increase the risks of all-cause mortality and cardiovascular mortality.

GW26-e2247 Analysis of the clinical characteristics and the characteristics of coronary artery diameter of patients with slow coronary flow

Shuiliang Zhang, Jangang Zhang, Zengrui Lun, Jian Wang, Aiyuan Zhang Weifang People's Hospital

OBJECTIVES This study analyzes the slow coronary flow (SCF) by clinical features and characteristics of coronary artery diameter to explore SCF patient’s risk factors and possible pathogenesis.

METHODS The study analyzes 2117 patients retrospectively which underwent coronary artery angiography in Weifang People’s Hospital during August 2012 to April 2014. We read their angiographic results, and selected 110 cases (5.20%) as the experimental group (SCF Group) who have a slow flow phenomenon with normal coronary arteries. The normal coronal artery (LAD, LCX and RCA) TIMI flow frame count in SCF Group is greater than the number of frames in published coronary TIMI flow frames count of two standard deviation. Then we selected 49 cases randomly as the control group (NCF Group) which have normal coronary arteries and coronary artery flow. Recording all subjects clinical data (including relevant medical history and laboratory parameters) and coronary artery lumen diameter data by read the angiographic results. Continuous data indicate (X±s). Count the number of cases presented with specific information. T-test and Chi-square were used to compare the two groups; Pearson correlation analysis was used to analyze the correlation between the two variables; Logistic regression analysis was used to find the possible risk factors. SPSS 17.0 was used to analyze data.

RESULTS 1. In SCF Group, the most common type of SCF is simultaneous three-vessel involvement (n =35,31.8%);The most common vascular involvement is LAD (n =73.74%).
2. the level of sex, smoking history, history of hypertension, diabetes, history of proportion, age, RBC, HGB, hemoglobin, MCV, PLT, MPV, FIB, Glu, BUN, creatinine, total cholesterol, total triglyceride, LDL, Apo-B and Lp-a is no significant difference (P >0.05); The level of PCV, DD and BUA in SCF Group is significantly higher than NCF Group (P <0.05); The level of HDL and Apo-Ai in SCF Group is significantly lower than NCF Group (P <0.05).
3. Characteristics of coronary luminal: the diameter of left main, proximal LAD, proximal LCX and proximal RCA in SCF Group is significantly larger than NCF Group (P <0.05).
4. The count of frames of each vessel is positive correlation with the proximal diameter of the vessel (correlation coefficient: LAD = 0.361, LCX is 0.396, RCA is 0.289, P <0.05).
CONCLUSIONS  1. The most common type of SCF is simultaneous three-vessel involvement; Without common vascular involvement is LAD.
2. The speed of coronary flow slows down with the increasing of the diameter of coronary.
3. The increasing of PCV, D-D, BUN, the diameter of left main and the proximal RCA may be risk factors of SCF.

GW26-e1259
Significance of Soluble Urokinase-type Plasminogen Activator Receptor in Patients with Coronary Heart Disease
Zhenda Zheng, Caillian Cheng, Dinghui Liu, Zhiming Song, Lin Chen, Xiaolian Qian
The Third Affiliated Hospital, SUN Yat-sen University, Guangzhou 510630, China

OBJECTIVES To uncover the clinical roles of Soluble Urokinase-type Plasminogen Activator Receptor (su-PAR) in different types of coronary heart disease.

METHODS We divided all the cases into four groups: 30 cases in NCAD group, 20 cases in SA group, 25 cases in UA group, 30 cases in AMI group. In all these groups, the plasma levels of su-PAR in plasma were measured with a solid phase enzyme-linked immuneosorbent assay (ELISA) when the cases were brought into this study and two weeks after they were brought into this study.

RESULTS All the samples taken from the peripheral vessels were immediately after the cases were brought into this study in the 4 groups, the difference of the plasma levels of su-PAR was significant. The AMI group were higher than the UA group ([4.53±0.52] mg/L vs. [3.23±0.48] mg/L, P<0.001); the UA group were higher than the SA group ([2.25±0.48] mg/L vs. [1.45±0.27] mg/L, P<0.001); however the different between the SA group and the NCAD group was not significant ([1.45±0.27] mg/L vs. [1.40±0.25] mg/L, P>0.05); the difference of the plasma levels of su-PAR between the cases were brought into this study and two weeks after was not significant (0.005±0.05, P>0.05).

CONCLUSIONS The change of su-PAR are different in different types of coronary heart disease patients. There is an ascending trend of su-PAR in the SA group, the ascending trend is more significant in the UA group, and the most significant in the AMI group.

GW26-e2273
Cardiac Troponin I and Longitudinal Strain Predict for Prediction of Clinical Outcomes in Patients with ST-segment Elevation
Zhongling Mo, Yin Wang, Liping Chen
Department of Echocardiography, Cardiovascular Disease Center, 1st Hospital of Jilin University

OBJECTIVES Cardiac biomarkers including the levels of cardiac troponin I (cTnI) after ST-segment elevation myocardial infarction (STEMI) is associated with infarct size and left ventricular remodeling and dysfunction. But the relationship between the biochemical measures and the global cardiac function is less well defined. This study is aim to observe the level of cTnI and longitudinal strain by speckle tracking in prediction of the outcomes.

METHODS 115 patients admitted with acute ST-elevation myocardial infarction (STEMI) in left descending artery and received percutaneous coronary intervention (PCI) in our study. Forty age-matched persons without prior MI, arrhythmia, hypertension, valvular disease and DM with normal coronary artery detected by coronary angiography were control group. The level of cTnI was studied from venous blood samples within 1 hour, 6 hours 12 hours and 18 hours. Within 72 hours of the onset of STEMI and 3 months follow-up, two-dimensional echocardiography was performed within 72 hours, 3 months follow-up.

RESULTS Biochemical markers showed a peak at 6 hours (159.74±122.0) for cTnI. Multivariable analysis revealed that the peak systolic longitudinal strain was independently related to structural changes which showed the 15% increase in diastolic dimension at 3-month follow-up compared with baseline.

CONCLUSIONS Our study showed cardiac troponin I and reduced systolic longitudinal strain were related to the outcomes of STEMI. cTnI levels are a useful risk stratification tool in STEMI patient.

GW26-e5428
A performance comparison of five different DECT image sets for Detecting Myocardial Perfusion Defects compared with 13NH3 PET
Wenhuan Li, Kuncheng Li
Xuanwu Hospital of Capital Medical University

OBJECTIVES To identify the optimal dual energy computed tomography (DECT) image set for the detection of myocardial perfusion defects, by comparing diagnostic performance of five different DECT image sets (iodine mapping, monoenergetic images, nonlinearly blended images, linearly blended images, and 100 kV images), using 13NH3 positron emission tomography (PET) as reference standard.

METHODS Forty-nine consecutive patients, with known or strongly suspected of coronary artery disease, were prospectively enrolled in our study. Cardiac DECT was performed at rest state using a second-generation 128-slice dual-source CT. The DECT data were reconstructed to iodine mapping, monoenergetic images, nonlinearly blended images, linearly blended images, and 100kV images by different postprocessing techniques. The myocardial perfusion defects on DECT images were visually assessed by two observers, using standard 17-segment model. Diagnostic accuracy of five different image sets was assessed using 13NH3 PET as the gold standard. Discrimination was quantified using the area under the receiver operating characteristic (ROC) curve (AUC), and AUCs were compared using the method of DeLong.

RESULTS The DECT and PET examinations were successfully completed in 30 patients and a total of 510 segments were analyzed. Cardiac PET revealed myocardial perfusion defects in 209 segments (41%). In ROC curve analysis, iodine mapping showed significantly better performance (AUC, 0.922) than monoenergetic images (AUC, 0.813), 100 kV images (AUC, 0.779), nonlinearly blended images (AUC, 0.763), and linearly blended images (AUC, 0.728) (P<0.001 for each comparison).

CONCLUSIONS DECT iodine mapping correlates well with 13NH3 PET and is superior to other DECT image sets for the detection of myocardial perfusion defects in the first-pass myocardial perfusion.

GW26-e4456
The clinical and the angiographic characteristics of the Korean-Chinese nationality and Han nationality with coronary heart disease of Yanbian area in China
Ian Cui, Chunzi Jin
Yan Bian University Hospital

OBJECTIVES To compare the clinical and the angiographic characteristics of the Korean-Chinese and Han nationality with coronary heart disease (CHD) in Yanbian area in China.

METHODS The risk factors and distribution of culprit vessels of coronary artery were retrospectively analyzed in 753 cases of CHD. The levels of plasma nitric oxide (NO) and the protein of endothelial nitric oxide synthase (eNOS) were measured by Elisa kit (Cusabio).

RESULTS Alcohol consumption was significantly higher in Korean-Chinese than in Han patients. No difference was observed in other risk factors between two groups. The numbers of stenotic coronary arteries were significantly higher in Korean-Chinese patients. Plasma NO and eNOS were significantly lower in Korean - Chinese patients.

CONCLUSIONS There are significant differences in the angiographic characteristics and the levels of plasma NO and eNOS between Korean-Chinese and Han patients with CHD in Yanbian area in China. Reduced ENOS may be responsible for increased stenotic coronary arteries in Korean-Chinese CHD patients compared to Han in Yanbian area in China. Mechanic link between alcohol consumption and eNOS/NO deficiency or angiographic abnormality needs further investigation.