family history and BMI on the influence of ACS. (3) According to the Chinese adults' Blood lipid control guide, the lipids of most ACS patients were on the proper level. The ACS patients were not always exist blood lipid disorder. (4) Regardless of men and women, the earlier they were attacked, the higher of TC, LDL-C, non-HDL and LDL-C/HDL-C ratio was. (5) There is a significant effect on the severity of coronary artery lesions of both HDL-C and non-HDL-C, and the effects didn't have gender differences.

GW25-e1450

Study on four-dimensional Echocardiography of Left Ventricular Systolic Function

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Objectives: To assess the left ventricular function of patients with myocardial infarction by 4D Auto LVQ, and correlation with 4D strain to positioning and quantitative analysis of the infarction area and size. To explore the application value of left ventricular function in the patients with myocardial infarction or myocardial ischemia to positioning and quantitative analysis of the infarction area and size by 4D Auto LVQ and 4D strain.
Methods: Twenty subjects and thirty patients with myocardial infarction using 4V full-volume cardiac probe, in 4D mode to obtain in the full volume real-time dynamic images on apical 4-chamber views of 4-6 cardiac cycle, to ensure the image frame frequency is greater than the heart rate of 40%, then choice the volume, start the software of the 4D Auto LVQ, and put two points in the end-diastolic volume and end-systolic volume of the endocardial, one point put on the middle of the mitral valve ring, the other put on the apex of the endocardial. The left ventricular end-diastolic volume (LVEDV),end-systolic volume (LVESV), ejection fraction (LVEF), stroke volume (SV), heart rate (HR) were derived by 4D Auto LVQ. We can use 4D strain to obtain the left ventricular 17 segments of LS which is based on 4D Auto LVQ. Take all the segments to express by the colar-code of IBE. All date use SPSS19.0 to analysis.
Results: (1) The difference for age HR was not significant between the group of patients with myocardial infarction and the normal group. Through 4D Auto LVQ compare to the normal group, the SV of the MI was not significant (P>0.05) LVEDV and LVESV were larger and the LVEF was lower in the group of patients with myocardial infarction than those of the control group, and had statistically significant difference (P<0.05). (2) The decrease of LVEF and the increase of the LVEDV measured with 4D Auto LVQ in MI was high negatively correlated (r=-0.720). (3) The 17 segment LS of the patients with 4D Strain were lower at the basal, mid, apical and apex than those of the control subjects and had statistically significant difference (P<0.05). (4) The control subjects with 4D Strain in the different left ventricular level had a regular: the left ventricular systolic peak strain of the mid is largest, the basal is minimum, the apical is in middle.
Conclusions: (1) The left ventricular systolic function measured with 4D Auto LVQ and assesses the regional wall motion or myocardium deformation of the left ventricular function accurately. (2) Correlated with 4D strain to positioning and quantitative analysis with myocardial infarction or myocardial ischemia of the infarction area and size.

GW25-e1452

Evaluation of Left Ventricular Remodeling by Three-Dimensional Speckle Tracking in Patients with ST-elevation Myocardial Infarction

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Objectives: To evaluate the left ventricular remodeling, left ventricular dimension, eject fraction, left ventricular rotation and torsion movement were detected by three-dimensional ultrasound speckle tracking in patients with ST-elevation myocardial infarction. The relationship between fatty acid desaturase polymorphism and left ventricular remodeling were analyzed.
Methods: Sixty patients admitted with acute ST-elevation myocardial infarction (STEMI) and received percutaneous coronary intervention (PCI) in our study. Thirty age-matched persons without prior MI, arrhythmia, hypertension, valvular disease and DM with normal coronary artery detected by coronary angiography were control group. The fatty acid desaturase polymorphism was studied from venous blood samples. Within 72 hours of the onset of STEMI and 3 months follow-up, three-dimensional echocardiography was performed. Left ventricular long axis view, apical three- and four-chamber view were analyzed offline by 3DT analysis software. LV remodeling was defined as a 15% increase from the baseline in left ventricular end-diastolic volume.
Results: Forty patients (23%) with left ventricular remodeling at three-month follow-up had significant clinic and echocardiographic characteristics which included predominance of the anterior wall MI, lower ejection fraction, and reduced systolic longitudinal strain. Fifty-two patients (86%) were positive for the fatty acid desaturase polymorphism; thirty-eight of patients with left ventricular remodeling (95%) were positive for the fatty acid desaturase polymorphism.
Conclusions: Our study showed anterior wall MI, lower ejection fraction, and reduced systolic longitudinal strain and fatty acid desaturase were related to left ventricular remodeling after STEMI.

GW25-e1717

The value of aorta pulse pressure/pulse pressure index in predicting the coronary heart disease in female patients

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Objectives: The present study was undertaken to investigate the significance of aorta pulse pressure (PP) and pulse pressure index (PPI) in predicting the incidence of coronary heart disease (CHD) and the severity of coronary artery lesion in female patients.
Methods: 717 female patients who had undergone coronary angiograthy were divided into CHD group (n=426, mean age 68.85±9.11 years old) and non CHD group (n=291, mean age 61.9±9.6 years old) according to the results of coronary angiography. The severity of coronary artery arteriosclerosis was assessed by the number of stenosis coronary artery. Aorta blood pressure was measured during angiograph.
Results: Aortic PP and PPI in the CHD group were significantly higher than those in the non CHD group (PP 62.55±22.65 mmHg vs. 54.96±21.51 mmHg, P<0.001; PPI 0.44±0.10 vs. 0.40±0.11, P<0.001). Linear correlation analysis indicated that PP and PPI were significantly positively associated with the occurrence of CHD (r =0. 166, 0. 190, P<0. 01). Furthermore, the severity of coronary artery arteriosclerosis was associated with increased PP and PPI (r =0. 177, 0. 196, P<0. 001). Logistic multivariate analysis showed that PPI was a independent predictor of CHD (OR=8.065, 95% CI 1.628-39.951, P=0.003).
Conclusions: The levels of aorta PP and PPI were significantly positively associated with the occurrence of CHD and the severity of coronary artery lesion in female patients. PPI is the most prominent predictor in diagnosis of CHD in woman.

GW25-e3403

Advanced glycation end products upregulated the expression of angiopoietin-like protein 4 via activation the renin-angiotensin system in endothelials

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Objectives: To investigate the effects of advanced glycation end products (AGEs) on the expression of angiopoietin-like protein 4 and its mechanisms in endothelials.
Methods: Endothelial cells were incubated with various concentrations of AGEs for 24 hours, the expression of angiopoietin-like protein 4 were detected by real-time PCR and western blot analysis, the concentration of angiotensin II in conditioned media and cell lysates were measured by enzyme-linked immunosorbent assay, FITC-labeled dextran filtration assay and transendothelial electrical resistance were performed to evaluate endothelial permeability.
Results: AGEs (80 μg/ml) increased the mRNA and protein levels of angiopoietin-like protein 4 [(250±32) % vs. 100%, (2.6±0.18) vs. 1.0, P<0.05] parallel with an increase in the levels of angiotensin II in conditioned media and cell lysates [(2.8±0.1) vs. (1.3±0.19) pg/ml, (0.35±0.04) vs. (0.19±0.04) pg/μg, P<0.05]. Incubation with AGEs also resulted in a significant increase in endothelial permeability [(0.46±0.09) vs. (0.15±0.09) OD, (43.39±2.82) vs. (73.28±2.64) $\Omega \cdot cm^2$, P<0.05]. However, pretreatment with angiotensin II receptor blocker Losartan (10^{-5} M) blunted these effects induced by AGEs (P<0.05).
Conclusions: AGEs upregulated the expression of angiopoietin-like protein 4 via activation local renin-angiotensin system in endothelial cells, which may be a new mechanism for AGEs increasing endothelial permeability.

GW25-e2235

The applied research of Fractional flow reserve to assess Coronary intermediate lesion

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Objectives: To Comparatively research the function of FFR and CAG that assess the coronary intermediate lesion; to guide the treatment decisions; to discuss some issues on the treatment of FFR assisted coronary lesions, including the value of application, security, methodology and potency ratio; to boost the application of FFR orderly to provide scientific basis.
Methods: 89 patients, who was suspected to suffer from CHD and examined with CAG. The stenosis≤50% of patients with stable angina were classified as the conservative treatment group (28 cases), and the 61 cases were randomly divided into FFR group (30 cases) and non- FFR group (31 cases).The group of the conservative treatment with medicine received a standard medical therapy for secondary prevention of CHD; in the FFR group, combining the FFR treatment plan on the basis of the traditional coronary assessment, carry out PCI treatment or conservative treatment with medicine; All accepted PCI patients were given a standard drug therapy for secondary prevention of CHD. After the patients discharge from hospital, regularly (1, 3, 6, 9, 12 months) Observe the patients' condition of angina improvement and MACE. Record every patient's of the number of stents implantation and the amount of the contrast agent, the hospitalization time, hospitalization expenses and the follow-up period expenses. Adopt SPSS 17.0 software to Dealing with all the observation data to sum up its application methodology.

Results: After follow-up observations, angina condition in FFR group and non-FFR group have improved before and after the treatment (75%, 76.7%, 96.8%, P<0.001); Non-FFR group better than FFR group, non-FFR group better than conservative treatment group; In the FFR group, 2 patients had the symptom of chest distress and breathe hard, but the symptom eased after about 20 seconds; while in the non-FFR group, one case of chest pain caused by coronary artery side branch occlusion .MACE occurred in two patients. One case occurred in the FFR group, he got STEMI 3 months after the operation. Another one case occurred in the non-FFR group, the patient stroked 7 months after the operation. The dose of the contrast agent, number of stents implantation, hospitalization time, all hospitalization expenses and the follow-up period all expenses, FFR group has an advantage over the others.

Conclusions: Though not doing the FFR testing, the critical lesions with Coronary artery stenosis≤50% is given drug therapy is being efficient, safe and economical; The conventional CAG found the critical lesions with the degree of coronary stenosis >50%, adopting FFR to guide treatment decisions. Its efficacy and safety are better than treatment decision of CAG. So it should be widely applied; Although FFR testing can increase in supplies expense, the average total cost of FFR group is lower than that of the non- group. It has a better price performance ratio; FFR determination after PCI is of help that evaluate the immediate efficacy and judge the Long-term prognosis.

GW25-e3249

Ischemic postconditioning may increase Serum Fetuin-A Level in patients with acute ST-segment elevation myocardial infarction undergoing percutaneous intervention

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Objectives: Fetuin-A inhibits inflammation and has a protective effect against myocardial ischemia. We investigated the influence of ischemic postconditioning on Serum Fetuin-A levels and high-sensitive C-reactive protein (hs-CRP) in patients with acute ST-segment elevation myocardial infarction undergoing percutaneous intervention.

Methods: Forty-five patients undergoing percutaneous coronary intervention (PCI) were randomly assigned to a control (n = 21) or postconditioning (PC, n = 24) group within 90 minutes after admission. After predilatation, in the Control group, no intervention was applied in the first 3 minutes of reperfusion, while in the Post-conditioning group, three cycles of 30-second angioplasty balloon deflation and 30-second inflation were repetitively applied. Blood samples were obtained and assayed for creatine kinase MB (CK-MB), Fetuin-A and hs-CRP.

Results: The control group presented with higher peak CK-MB as compared with the PC group (123.67±44.19 vs. 93.08±35.29 U/L, P<0.05). After PCI, PC was associated with a lower level of hs-CRP in comparison with the control group (6.07± 1.35 vs. 7.03±1.27 mg/L, P<0.05). Serum Fetuin-A levels in the PC group was higher than that in the control (161.06± 23.98 mg/L vs. 144.59±22.76 mg/L, P<0.05).

Conclusions: Postconditioning may increase Serum Fetuin-A level and decreased high-sensitive C-reactive protein in myocardial infarction patients.

GW25-e4341

The comprehensive evaluation of Coronary artery anatomy and myocardial perfusion imaging using dual-source computed tomography of the heart: comparison with conventional coronary angiography

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Objectives: To assess the feasibility and accuracy of 128-slice dual-source computed tomography in the comprehensive evaluation of coronary artery anatomy and myocardial perfusion function.

Methods: 30 patients (20 male, 10 female, mean age 59.03±8.16 years), suspected or diagnosed as stable angina, were performed computed tomography coronary angiography (CTCA) and adenosine-induced stress (AIS) computed tomography perfusion (CTP) using dural-source computed tomography (DSCT). We completed coronary angiography (CAG) two weeks later. According to the results of CAG, they were divided into 3 groups: no stenosis, non-obstructive stenosis (coronary artery stenosis 50-70%) and obstructive stenosis (coronary artery stenosis ≥70%). We compared the results of DSCT with the gold standard CAG and evaluated the accuracy of DSCT in the diagnosis of coronary artery disease (CAD).

Results: 87 vascular territories of 29 patients who completed both CAG and CTCA combined with CTP were analyzed. Compared with CAG (n=29), the sensitivity, specificity, PPV and NPV of CTCA on a per vessel basis were 0.841, 0.907, 0.902, 0.848 for non obstructive stenosis, and 0.821, 0.847, 0.719, 0.909 for obstructive stenosis, respectively. The sensitivity, specificity, PPV and NPV of CTP on a per vessel basis were 0.545, 0.837, 0.774, 0.643 for non obstructive stenosis, and 0.643, 0.780, 0.581, 0.821 for obstructive stenosis, respectively. The sensitivity, specificity, PPV and NPV of CTP combined with CTCA on a per vessel basis were 0.886, 0.674,

0.736, 0.853 for non obstructive stenosis, and 0.893, 0.627, 0.532, 0.925 for obstructive stenosis, respectively.

Conclusions: Using DSCT, we could complete AIS-CTP and CTCA at the same time. CTCA and CTP provide different and complementary information in the aspect of coronary artery anatomy and myocardial perfusion function. DSCT may be the promising non-invasive methods for CAD diagnosis in the future.

GW25-e1658

The role of Chinese Medicine in the treatment of coronary heart disease in postmenopausal women

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Objectives: This paper systematically reviewed the role of Chinese Medicine Treatment (CMT) of coronary heart disease (CHD) in postmenopausal women.

Methods: Controlled trials (CTs) relating CMT of CHD in postmenopausal women, with conventional western medicine as a routine treatment or not were retrieved. The database includes Pubmed, The Cochrane Library, Chinese Biomedical Database (CBM), Chinese VIP Information (VIP), China National Knowledge Infrastructure (CNKI), Wanfang Databases, China Proceedings of Conference Full-text Database (CPCD), Chinese Doctoral Dissertations Full-text Database (CDFD) and Chinese Master's Theses Full-text Database (CMFD). Data extraction and analyses were conducted in accordance with the Cochrane standards. We assessed the risk of bias for each included studies and evaluated the strength of evidence on pre-specified outcomes.

Results: Compared with the hormone therapy, CMT could significantly elevate the estradiol levels, improve the expression of nitric oxide, low-density lipoprotein obviously, increase coronary blood flow, alleviate angina pectoris, and have estrogen-like effects, with not many side effects and reduce the adverse events.

Conclusions: Combined with Chinese medicine showed better effect than only hormone therapy in postmenopausal women with CHD.

GW25-e3171

Syndrome ECG in the diagnosis of acute coronary syndrome is wrong

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Objectives: Retrospective analysis of clinical data of patients with acute coronary syndrome, diagnosis value of electrocardiogram in patients with acute coronary syndrome.

Methods: From 2011 January to 2013 January in our hospital 60 cases of ACS patients electrocardiogram and TnI contrast were analyzed.

Results: ECG (+) in 26 cases of patients, TnI was positive in 21 cases, the positive coincidence rate 80.77%. ECG (-) in 34 cases of patients, 28 cases were TnI negative, positive coincidence rate 17.65%. P=0.0000. ECG (+) in patients with coronary artery stenosis in 25 cases, the positive rate was 96.15%, ECG (-) in patients with coronary artery stenosis in 16 cases, accounting for 47.06%. P=0.0002.

Conclusions: ECG and TnI have good consistency for the diagnosis of MI, reflects the degree of vascular disease and better. ECG (-) patients cannot be ruled out the possibility of simultaneous detection of NSTE-ACS, ACS can reflect the degree of vascular lesions in patients with ECG and TnI, has potential clinical significance.

GW25-e3286

The effect of EGb on oxidative modification of LDL in patients with CAD in vivo

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Objectives: To study the effect of EGb on oxidative modification of LDL in patients with coronary artery disease (CAD) in vivo.

Methods: Sixty-four CAD patients diagnosed by coronary arteriography were randomly divided into two groups. All patients were treated with the same drugs and stopped taking all anti-oxidants. Thirty-two patients in treatment group treated with EGb, everyone take EGb (Tianbaoning) two tabellas every time and three times every day. Thirty-two patients in control group treated with placebo and took the placebo just the same method with the former. Before and after drug therapy, plasma LDL isolated by single discontinuous density gradient ultracentrifugation was oxidized with $CuSO_4$ for 24 hours. The LDL oxidation was measured by monitoring of malondialdehyde (MDA) content.

Results: There was no significant difference in oxidative modification of LDL between the two groups before drug administration, but significant difference could be found after drug administration.

Conclusions: EGb can obviously decrease oxidative modification of plasma LDL in CAD patients and has significant effect on the treating and preventing of CAD.