

Results Compared with euglycemia group, hypo- or hyperglycemia groups were all associated with higher in-hospital and 3-year all-cause mortality. There was a U-shaped relationship between admission FPG levels and short- and long-term all-cause mortality. This U-shaped relationship applied equally to subgroups in the context of contemporary treatments.

Conclusions In older patients with AMI, increased as well as decreased admission FPG levels could predict higher in-hospital and 3-year mortality. There was a striking U-shaped relationship between admission FPG levels and short- and long-term mortality. An initial admission FPG level of 5–7 mmol/l may be desirable because it was associated with better clinical outcomes.

e0446 DIFFERENTIAL INFLUENCE OF ABNORMAL FASTING PLASMA GLUCOSE ON MORTALITY AND LEFT VENTRICULAR FUNCTION IN OLDER PATIENTS WITH ACUTE MYOCARDIAL INFARCTION RESULTS FROM THE BEAMIS STUDY

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Objective The aim of this study was to assess whether the admission FPG levels were associated with all-cause mortality and left ventricular (LV) function in older patients with acute myocardial infarction (AMI) by analysing data from the Beijing Elderly Acute Myocardial Infarction Study (BEAMIS).

Methods From April 2004 to October 2006, 1854 older (age ≥ 65 years) AMI patients were consecutively enrolled in BEAMIS. Patients were categorised into 4 groups: hypoglycemia group (N=443, 23.9%), FPG ≤ 5 mmol/l; euglycemia group (N=812, 43.8%), 5.1 mmol/L \leq FPG ≤ 7 mmol/l (5–7 mmol/l); mild hyperglycemia group (N=308, 16.6%), 7.1 mmol/L \leq FPG ≤ 9 mmol/l (7–9 mmol/l); and severe hyperglycemia group (N=291, 15.7%), FPG ≥ 9.1 mmol/l. The primary outcomes were in-hospital and 3-year mortality and LV function during admission.

Results There was a near-linear relationship between FPG levels and Killip class, with Killip classes I/II and III/IV being more frequent among patients with hypoglycemia and hyperglycemia, respectively (p=0.011). However, no significant correlation was found between admission FPG levels and LVEF, LV end-diastolic or end-systolic diameter (p=0.837, 0.073, 0.165, respectively). Both admission FPG levels (p=0.002) and Killip classes (p<0.001) were all independent significant predictors for in-hospital/3-year mortality. Compared with the euglycemia group, both the hypo- and hyperglycemia groups were associated with higher in-hospital and 3-year all-cause mortality. Patients in the FPG 5–7 mmol/l group had the best outcome. In-hospital mortality of patients with hypoglycemia and Killip class IV was the highest in the overall cohort, followed by that of patients with severe hyperglycemia and Killip class IV (60% vs 50.0%, p=0.015). In contrast, 3-year mortality of patients with severe hyperglycemia and Killip class IV was highest followed by that of patients with hypoglycemia and Killip class IV (70% vs 60.0%, p=0.001).

Conclusions In older patients with AMI, abnormal FPG values had differential influences on LV function and mortality. Not only increased but also decreased admission FPG levels could predict in-hospital and 3-year mortality. There was a U-shaped relationship between admission FPG levels and short- or long-term mortality, and a near-linear relationship between increased admission glucose levels and higher Killip classification.

e0447 COMBINATION OF CONVENTIONAL BIOMARKERS FOR RISK STRATIFICATION IN NON ST ELEVATION ACUTE CORONARY SYNDROME

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Objective To investigate the predicting value of electrocardiography (ECG) deviation, plasma levels of troponin I (cTnI) and Combination of conventional biomarkers in the risk stratification and prognosis for patients with non-ST elevation acute coronary syndromes (ACS).

Methods 264 patients with acute chest pain were admitted to Zhu Jiang hospital consecutively with the diagnosis of non-ST elevation acute coronary syndromes from June 2001 to January 2010. 18 leads of ECG and cTnI all biomarkers comprising cTnI test were performed as soon as admission. All patients were assigned to ST depression group and non ST depression group according to ECG, while cardiac troponin I (cTnI) was determined at bedside and the patients were re-divided into cTnI positive group (TnI ≥ 0.1 μ g/l) and TnI-negative group (TnI < 0.1 μ g/l) according to TnI level. Observing composite cardiac events during hospitalisation to determine the cut-off point of each biochemical marker depending on whether cardiac events occurred. When there was an abnormal value, we scored it for one point to calculate multimarker score. Patients were categorised into 3 strata: low stratum (0–3 scores), Intermediate stratum (4–6 scores) and high stratum (7–9 scores). The cardiac events were analysed in each group in-hospital. The logistic regression analysis was used to analysis the relation among multivariate factor to cardiac events, and the predictive power of admission ECG, cTnI and multimarker score to cardiac events were analysed with ROC curves.

Result Compared with non-ST segment depression, composite cardiac events were increased significantly in ST segment depression group. Compared with troponin I-negative group, composite cardiac events were significantly increased in Troponin I positive group. And patients in high stratum had a higher cardiac event rate than in low. Multivariate logistic regression analysis showed that multimarker score, troponin I and ST segment had independent predictive ability to cardiac events respectively. The predictive power of multimarker score for cardiac events was significantly higher than cTnI and ECG (area under the ROC: 0.832, 0.717 and 0.636, respectively). Jointing the above together, the predictive power was significantly improved (area under ROC: 0.893).

Conclusion The changes of ST segment, plasma cTnI level and multimarker score play an important role on risk stratification and prediction of cardiac events in patients with non-ST elevation ACS, but multimarker score may demonstrate a more strong prognostic discriminatory capacity, and Jointing the above together, may increase the prognostic accuracy obviously.

e0448 A STUDY OF RELATION BETWEEN TISSUE FACTOR PATHWAY AND ACUTE CORONARY SYNDROME

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Objective To investigate the changes of plasma quantity of Tissue Factor (TF) and Tissue Factor Pathway Inhibitor (TFPI) in different type of Acute coronary syndrome (ACS) patients and the association between Tissue Factor Pathway and Coronary Heart Disease and the application prospects of using TFPI to cure the ACS patients.

Methods This study was conducted with 66 coronary heart disease (CHD) patients and 22 healthy adults. The blood specimens were collected before using Low molecular weight heparin (LMWH) in ACS patients; and the blood specimens of Stable angina pectoris (SAP) patients and healthy adults were collected on the second morning with a fasting status. After centrifugal treatment, the plasma was saved in a Ultra-low temperature refrigerator. Coronary angiography was carried out on each one of the selected objects, and the quantity levels of total cholesterol (TC), triglyceride (TG), high density lipoprotein -cholesterol (HDL-C) and low density lipoprotein -cholesterol (LDL-C) was detected. The plasma TF and TFPI quantity was measured by ELISA.

Results The plasma TF antigen levels were higher in the Acute myocardial infarction (AMI) and Unstable angina pectoris (UAP) groups than in Stable angina pectoris (SAP) and control groups (161.08 ± 20.90 and 152.76 ± 20.66 pg/ml vs 99.72 ± 16.75 and 94.32 ± 12.93 pg/ml, $p < 0.05$), there was no significant difference between the AMI group and UAP group, SAP group and control group ($p > 0.05$). The plasma TFPI-1 antigen levels were higher in the AMI and UAP groups than in the SAP and control groups (32.05 ± 8.52 and 31.49 ± 10.61 ng/ml vs 19.93 ± 9.22 and 19.21 ± 9.60 ng/ml, $p < 0.05$). The plasma TFPI-2 antigen levels were higher in the AMI and UAP groups than in the SAP and control groups (4.56 ± 0.96 and 4.73 ± 1.04 ng/ml vs 2.43 ± 1.07 and 2.06 ± 0.64 ng/ml, $p < 0.05$).

Conclusions The plasma TF, TFPI-1, TFPI-2 antigen levels of ACS patients are higher than those of SAP patients and healthy adults, the result indicates ACS patients have an abnormally activity of coagulation system, the tissue factor pathway plays an important role in ACS patients, during our clinical work, we can reduce the incidence of coronary event through actively controlling plasma levels of tissue factor pathway in CHD patients; There were positive relationships between plasma TF, TFPI-1, TFPI-2 quantities and serum TC, LDL-C quantities, we can reduce the activity of tissue factor pathway through controlling the quantities of TC and LDL-C.

e0449 EFFECTS OF CHOLESTEROL-LOWERING THERAPY WITH ROSUVASTATIN CALCIUM TABLET ON CORONARY FLOW RESERVE IN PATIENTS WITH UNSTABLE ANGINA PECTORIS

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Objective To investigate the effects of cholesterol-lowering therapy with rosuvastatin calcium tablet on coronary flow reserve (CFR) patients with unstable angina pectoris (UAP) and hypercholesterolaemia.

Method 40 patients with UAP were randomly divided into rosuvastatin calcium tablet therapeutic group ($n=20$) and conventional therapeutic group ($n=20$). By using colour Doppler ultrasound the coronary flow reserve was measured in patients with UAP before and after 3 months cholesterol-lowering therapy.

Result After cholesterol-lowering therapy for 3 months the serum total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), triglyceride (TG) decreased significantly $p < 0.01$. The coronary flow reserve was increased from 1.92 ± 0.41 to 2.97 ± 0.62 ($p < 0.01$). An inverse correlation was found not only between TC and CFR ($r = -0.44$, $p < 0.05$) but also between LDL-C and CFR ($r = 0.47$, $p < 0.05$).

Conclusion Cholesterol-lowering therapy with rosuvastatin calcium tablet may improve coronary flow reserve in patients with UAP and hypercholesterolaemia.

e0450 USEFULNESS OF THE NEUTROPHIL TO LYMPHOCYTE RATIO IN PREDICTING COMPLICATIONS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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Objective To investigate the relationship between the neutrophil to lymphocyte ratio and the morbidity of AMI complications.

Methods A total of 218 patients with ST segment elevated myocardial infarction whose blood routines were obtained at the admission were studied. All cases were divided into two groups according to the neutrophil to lymphocyte ratio of small to large size. Then we analysed the morbidity of AMI complications between the two groups.

Results The peak value of cardiac troponin I was higher in group B (32.5 ± 21.7 ng/ml and 56.8 ± 39.4 ng/ml respectively, $p < 0.01$). The incidences of arrhythmia (17.43% and 39.45%, $p < 0.01$), heart failure (22.94% and 51.38%, $p < 0.01$) and death (2.75% and 11.01%, $p < 0.05$) were also higher in group B. The multivariate stepwise regression analysis showed that the neutrophil to lymphocyte ratio and the morbidity of AMI complications had certain correlation.

Conclusions The neutrophil to lymphocyte ratio is a reliable indicator that can predict morbidity of AMI complications.

e0451 COMBINED USE OF OXIDISED LOW DENSITY LIPOPROTEIN AND C-REACTIVE PROTEIN FOR THE PREDICTION OF THE ACUTE CORONARY SYNDROME

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Background Serum CRP levels can predict future risks among patients with stable and unstable angina, but CRP was easily infected by many factors. Increased blood levels of ox-LDL could play a role in these circumstances. However, Combined detection of ox-LDL and CRP for the prediction of the acute coronary syndrome are not known.

Methods All of the patients received a coronary angiography owing to complaining of chest pain. The coronary artery disease diagnosis and stenosis severity was judged by two independent experts and the patients were accounting Gensini Score. The serum oxLDL and high sensitivity C-reactive protein (hs-CRP) levels were measured using a sandwich ELISA method. The MACEs of documented CAD patients were recorded in the one year follow-up period. SPSS software was chosen to analyse the influence of Oxidised Low Density Lipoprotein and C-reactive protein on the incidence of MACE.

Results (1) In acute myocardial infarction patients, ox-LDL and hs-CRP levels were significantly higher than in patients with unstable angina pectoris ($p < 0.01$) or stable angina pectoris patients ($p < 0.01$) or in controls ($p < 0.01$) (acute myocardial infarction, oxLDL 177.5 mmol/l, hs-CRP 21.4 mg/l; unstable angina pectoris, oxLDL 97.5 mmol/l, hs-CRP 6.7 mg/l; stable angina pectoris, oxLDL 62.3 mmol/l, hs-CRP 3.7 mg/l; Control, oxLDL 41.7 mmol/l, hs-CRP 2.7 mg/l). (2) A positive correlation between the serum levels of oxLDL and CRP with the severity in patients with coronary artery disease. (3) Combined use of Oxidised Low Density Lipoprotein and C-reactive protein can predict the severity in patients with acute coronary syndrome and the risk for major adverse cardiac event (MACE) in patients with acute coronary syndrome ($p < 0.005$).

Conclusions This study demonstrates that ox-LDL and hs-CRP levels show a significant positive correlation with the severity of