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

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**Objectives** 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: hypoglycaemia group (N=443, 23.9%), FPG≤5 mmol/l; euglycaemia group (N=612, 48.3%), 5.1 mmol/L≤FPG≤7 mmol/l (5.7 mmol/l); mild hyperglycaemia group (N=508, 16.6%), 7.1 mmol/L≤FPG≤9 mmol/l (7.9 mmol/l); and severe hyperglycaemia 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 hypoglycaemia and hyperglycaemia, respectively (p<0.01). 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 independent significant predictors for in-hospital/3-year mortality. Compared with the euglycaemic group, both the hypo- and hyperglycaemic 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 hypoglycaemia and Killip class IV was the highest in the overall cohort, followed by that of patients with severe hyperglycaemia and Killip class IV (60% vs 50.0%, p=0.015). In contrast, 3-year mortality of patients with severe hyperglycaemia and Killip class IV was highest followed by that of patients with hypoglycaemia 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 higher in-hospital and 3-year mortality. There was a U-shaped relationship between admission FPG levels and short- and long-term mortality, and a near-linear relationship between increased admission glucose levels and higher Killip classification.
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±12.95 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 4.75±1.04 ng/ml vs 2.45±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.

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±59.4) ng/ml respectively, p<0.01). The incidences of arrhythmia (17.45% and 59.45%, 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.