PCI within 12 h after the onset of AMI, including 54 cases complicated with diabetes mellitus (Group DM) and 76 cases without diabetes (non-diabetes mellitus group, Group ND). 76 Patients in group ND (without diabetes) were divided into group A (with preinfarction angina, n=40) and group B (without preinfarction angina, n=36). Another 54 patients in group DM (with diabetes) were divided into group C (with preinfarction angina, n=28) and group D (without preinfarction angina, n=26). The basic clinical characteristics, baseline demographic, angiographic and procedural details in these four groups were similar. Myocardial enzyme was continuously measured. Clinical and angiographic features, the extent of coronary artery lesions were analysed. The incidence of malignant arrhythmia, heart failure, cardiogenic shock, and the rate of MACE (major adverse cardiac event, including cardiac death, reinfarction, reconstruction of ischaemic target vessel) in hospitalisation were observed. The coronary collateral circulation and spontaneous coronary recanalisation (SR) of infarct related artery (IRA) in coronary artery disease were also analysed.

Results 1. There were no significantly difference between baseline clinical document and the time of revasculatisation of IRA in each group (p>0.05). 2. The peak value of creatine kinase MB (CK-MB) was significantly lower in group A than that in group B (p<0.05). And there was no significantly difference between each group (p>0.05). 3. The character being analysed during CAG 3.1.1. The characteristic of coronary artery disease. 3.1.1.1. The incidence of multi-branch lesions were significantly lower in group A than that in group D (p<0.05), while, there was no significant difference in other groups (p>0.05). 3.1.2. The score of Gensini to evaluate coronary artery angustiy in group A was significantly lower than that in group B (p<0.05), C (p<0.05) and D (p<0.01), but there weren’t significant differences among group B, C and D (p>0.05). 3.1.3. There were no significantly difference of spontaneous coronary recanalisation (SR) of infarct related artery (IRA), coronary collateral circulation (CCC) in coronary artery disease, diffuse affection and the number of occlusion vascular among four groups (p>0.05 for these comparisons). 3.2. The evaluation during PCI 3.2.1. There was no significant differences in PCI immediate success rate during hospitalisation, the number of stents implented into IRA, the blood flow after the plenting of stents and the phenomenon of no-reflow among four groups (p>0.05). 3.2.2. The blood flow of the IRA before the plenting of stents was significantly higher in group A than that in group B (p<0.05). 4. The clinical outcomes of patients in the near future after PCI during hospitalisation. 4.1. There were no significantly difference of malignant arrhythmia, total cardiac mortality rates, acute heart failure and cardiogenic shock (KillipII IV), reconstruction of ischaemic target vessel among four groups (p>0.05). 4.2. The incidence of reinfarction and stent thrombosis was significantly lower in group A than those in group B (p<0.05).

Conclusion Preinfarction angina can reduce myocardial infarct size and the extension of AMI, and have beneficial effects on blood flow of IRA before PCI. It can reduce not only the happening frequence of reinfarction but also the stent thrombosis. So preinfarction angina can improve short-time prognosis in AMI. But such beneficial effects of preinfarction angina were not observed in diabetic patients, suggesting that diabetes might prevent the protection effects of ischaemic preconditioning.

**e0425** CLINICAL AND CORONARY ANGIOGRAPHY CHARACTERISTICS BETWEEN YOUNG (≤45) AND OLD (>60) PATIENTS WITH CORONARY ARTERY DISEASE

Zhang Weiling, Qin Zhongsheng, Pan Sancong, Wan Li, Liu Ying, Cui Huahua, Zhang Haiming, Sun Yuxia, Li Xiangbin, Jinsheng People’s Hospital Department of Cardiology

**Objective** To study the clinical and coronary angiography characteristics between young (≤45) and old (>60) patients with coronary artery disease.

**Methods** Angiographic and clinical data from A: 176 patients (≤45) selected from 1795 patients with coronary artery disease from April 2006 to May 2010 were compared to B: 464 patients (>60) with coronary artery disease from April 2007 to May 2009 in our department.

**Results** 1. The male in A more than B (93.1% vs 61.4%, p<0.01). 2. The patients with hypertension or type 2 diabetes mellitus in A were less than B (all p<0.01). 3. The patients with Smoking, taking drug named Anajia or a positive family history in coronary artery disease in A were much more than B (all p<0.01). The incidences of dyslipidemia in A were more than B (28.2% vs 19.0%, p<0.05). 4. The patients because of acute myocardial infarction come to hospital were more than B (72.0% vs 62.5%, p<0.01). 5. Auto driver, the self-employed and government functionary were the top three categories of the coronary heart disease, but farmer, worker and retired military cadre in B. (6) Morbidity: the patients (≤45) with coronary artery disease accounted for 9.7% in all patients with coronary artery disease in the same time (the cases 92 (≥40) accounted for 4.6%). (7) The patients done coronary angiography in A were more than B (64.0% vs 38.1%, p<0.01). Singer vessel coronary artery diseases were seen more frequently in A than B (50.9% vs 21.5%, p<0.01), and especially left anterior descending branch diseases occupied 87.7%; two-vessel diseases and collateral circulation were less in A than B (all p<0.05); three-vessel diseases, right coronary artery and circumflex diseases were less in A than B (all p<0.01); however lesions and left main artery, left anterior descending branch diseases have no statistics meaning in A and B. The meaningless lesion coronary arteries diseases were much more in A than B (59.0% vs 0.6%, p<0.01). The myocardial infarction patients’ account for 90% in the groups who had meaningless coronary arteries change showed by coronary angiography in A.

**Conclusion** The feature of coronary heart disease (≤45): (1) Most because of acute myocardial infarction come to hospital; (2) The male, short of labour, more tension, heavy work pressure, the...
incidences of dyslipidemia, smoking and the early onset group had stronger family history of coronary arteries diseases were high risk groups. The patients taking Anajiya may also the high risk groups in our area. (3) Morbidity: accounted for 9.7% in all patients with coronary artery disease in the same time (the cases (≤40) accounted for 4.6%). (4) (4) The coronary angiography characteristics about half is the single vessel diseases, especially left anterior descending branch diseases; coronary angiography in some patients has no significant lesions, and mainly to myocardial infarction; there were differences about two and three-vessel diseases, right coronary artery and circumflex diseases, collateral circulation between young (≤45) and old (>60); there were not differences about the left main coronary arteries diseases, left anterior descending branch diseases and the degree of narrowed coronary arteries between young (≤45) and old (>60).

Clinical and Research Medicine: Acute Coronary Syndrome

Proteomic Analysis of Plasma from Patients with Acute Coronary Syndrome

Yu Xinya, Qiao Shubin, Yang Yuejin, Chen Jinli, Liu Habo, Qin Xuewen, Hu Fenghuan, Chen Jue, Gao Runlin. Department of Cardiology Cardiovascular Institute, Fujian Hospital Chinese Academy of Medical Science, Peking Union Medical College

Background Proteomics is the new system biological approach to the study of proteins and protein variation on a large scale as a result of biological processes which can identify several proteins at a given time in a sample. Proteomic analysis has provided important insights into ischaemic heart disease, heart failure, and cardiovascular pathophysiology. Blood represents one of the most accessible sources for biomarkers and has broad clinical significance. Serum or plasma samples provide an excellent source of materials for proteomic analysis.

Objectives The aim of this study was to seek the special plasma molecule in the plasma protein map from the patient with acute coronary syndrome (ACS) using proteomics.

Methods Plasma from 60 patients, 20 with acute myocardial infarction (AMI) and 20 with unstable angina (UA), was investigated. The control group included 20 age-matched volunteers. 2-DE-DIGE/MALDI-TOF-MS analysis was performed during the procedure. The optimal abundant proteins in plasma were removed with the polyclonal antibody affinity column.

Results With 2DE-DIGE/MALDI-TOF-MS analysis, 14 different expression proteins were found in plasma of patients with ACS. (1) As compared with the control, serum amyloid A2, C20 kDa protein, alpha-1 antitrypsin, haptoglobin beta and alpha-2 chain, C6 precursor and C4, fibrinogen gamma chain and fibrin beta were up-regulated in plasma from UA and AMI patients. (2) Meanwhile, apolipoprotein A1, A-IV and A-IV precursor, TF 11 and 7 kDa protein, transthyretin, gelsolin and gelsolin precursor isoform 1, myosin-11, HBB Truncated beta-globin were down-regulated in plasma from ACS patients. (3) Moreover, ELISA analysis showed that SAA was up-regulated and gelsolin was down-regulated in the plasma of UAP and AMI.

Conclusions Various proteins involving in acute phase protein, complement system, and cytoskeleton, apolipoprotein, energy metabolism were participated in the process of ACS. The newly discovered different proteins, serum amyloid A2 and gelsolin might be the special molecules for ACS. But further investigation should be carrying out in the future.