**METHODS** The levels of serum CRP and blood Hcy in 280 patients suffered from coronary heart disease (including stable angina pectoris, unstable angina pectoris and acute myocardial infarction) and 80 healthy people from January 2013 to December 2014 were detected. The data were analyzed by SPSS 21.0.

**RESULTS** The levels of serum CRP was 13.05±3.68 mg/L and blood Hcy was 21.17±8.63 μmol/L in patients with coronary heart disease were higher than those in the control group (5.02±1.60 g/L, 8.15±2.03 μmol/L), the differences were statistically significant (P < 0.05). The levels of serum CRP and blood Hcy in the acute myocardial infarction subgroup of coronary heart disease patients (19.62±3.03 mg/L, 21.10±7.02 μmol/L) were higher than those in the unstable angina pectoris subgroup (12.98±6.11 mg/L, 20.82±6.04 μmol/L) (P < 0.05); while, the levels of serum CRP and blood Hcy in the unstable angina pectoris subgroup were higher than those in the stable angina pectoris subgroup (7.65±4.81 mg/L, 14.01±4.30 μmol/L) (P < 0.05), the differences were statistically significant (P < 0.05).

**CONCLUSIONS** The levels of serum CRP and blood Hcy are high expression in patients with coronary heart disease, and their expression level can be used as predictors to prompt the severity and type of coronary heart disease.

**GW26-e2480**

**Long-term follow-up study of peripheral blood EMPs, EPCs levels in acute coronary syndrome patients with or without diabetes**

Yashu Kuang,1 Ying Li1

1Department of Cardiology, Shanghai East Hospital, Medical school, Tongji University

**OBJECTIVES** Explore the levels of peripheral blood CD144+/ Annexin V− EMPs, EPCs in patients with acute coronary syndrome (ACS) with or without diabetes during long-term follow-up. Discuss the relationship among EMPs, EPCs, coronary artery acute ischemic events and Abnormal glucose metabolism.

**METHODS** Study included 66 patients with acute coronary syndrome (ACS) according to the coronary angiography. Based on clinical symptoms and cardiac marker levels, the patients were divided into two groups, A group: diabetes mellitus, acute coronary syndrome (ACS) (n=45), B group: acute coronary syndrome (ACS) (n=21). Two groups of patients were given drug treatment and atorvastatin and followed up for 6 months. Respectively, test the levels of CD144+/ Annexin V− EMPs, EPCs in peripheral blood and clinical indices, the presence of ischemic symptoms before and after the follow-up.

**RESULTS** During the 6 months follow-up, all of the patients have no abnormally elevated myocardial markers, sudden death due to coronary heart disease (CHD) and again revascularization readmission to the hospital. The clinical EMPs levels also by T test analysis showed no significant difference before and after follow-up between the two groups. However, no matter A or B, the level of CD144+/ Annexin V− EMPs has no significant difference and before follow-up between the two groups. While, the level of CD144+/ Annexin V− EMPs before follow-up was significantly higher than after follow-up (P < 0.05), and before and after follow-up there is no correlation between glycosylated hemoglobin and EMPs in group A. The level of EMPs of group A was significantly higher than that of group B (P < 0.05), and it was positively correlated to glycosylated hemoglobin (r=0.457). After follow-up, the level of EMPs of group A was significantly lower than that of group B (P < 0.05), and it was negatively correlated to glycosylated hemoglobin (P < 0.05, r =-0.365). However, no matter A or B, the level of EMPs before follow-up was significantly higher than after follow-up (P < 0.05).

**CONCLUSIONS** No matter combining diabetes mellitus or not, acute ischemic events caused endothelial dysfunction is the dominant factor of peripheral EMPs levels, also the main cause of activating repair mechanisms to promote EMP mobilization. Diabetes patients in acute coronary events release more EPCs, which are positively related with glycosylated hemoglobin levels. But when atherosclerotic plaque turns to stable, the ability of repairing is much lower in patients with diabetes, and has negative correlation with glycosylated hemoglobin levels.

**GW26-e3574**

Adiponectin stabilizes aortic plaques in ApoE−/- mice via regulating the level of autophagy

Yanwei Yu, Jingjie Li
First affiliated hospital of Harbin medical university

**OBJECTIVES** Adiponectin (APN), an adipocyte-derived adipokine, offers anti-atherogenic effects although the precise mechanism remains unclear. Autophagy reported as the major intracellular degradation system can be induced in stress conditions, such as atherosclerosis and oxidative stress. This study was designed to examine the correlation between APN and autophagy in apolipoprotein E-deficient (ApoE−/-) mice.

**METHODS** Adult ApoE−/- mice were fed a high fat diet for 12 weeks. After 8 week feeding, mice were treated with 10 ug/kg APN or vehicle every day for 4 weeks. The size of aortic plaque was measured by oil red O staining and autophagosomes were detected by transmission electron microscope. Western blot was used to evaluate the expression of autophagy maker protein, LC3II.

**RESULTS** The size of aortic plaque was reduced by APN. And the levels of autophagosomes decreased in APN group compared with control group. Furthermore, APN also decreased LC3II and LC3II/I protein expression ratio.

**CONCLUSIONS** These data suggest the autophagy in ApoE−/- mice caused by high diet could be ameliorated by APN.

**GW26-e0455**

Establishing the renalase gene low-expression modal in cardiac tissue of Sprague-Dawley rats via lentivirus-mediated RNA interference technology

Xiaogang Li, Weihong Jiang
The Third Xiangya Hospital of Central South University

**OBJECTIVES** Renalase is a novel secretory amino oxidase and expressed in kidney and heart. To research the protective mechanism of renalase in local heart tissue, we established the low-expression renalase model with lentivirus-mediated RNA interference technology.

**METHODS** Three renalase-targeting oligonucleotides were designed after analyzing the mRNA of renalase. Lentivirus particles were prepared by LV expression Systems (using the trono 3 plasmid component system), and then, LV-RNLS-shRNAs and LV-NC-shRNA were respectively transfected into H9C2 cells in different culture dishes. The optimal oligonucleotide was screened by real-time PCR and western blotting. The renalase gene low-expression in the heart tissue of rats via pericardial cavity injection. And real-time PCR and western blotting were used to detect renalase gene expression in the heart.

**RESULTS** In the cell screening experiment, the efficacy of the inhibition of renalase mRNA expression was 93.7%, and that of renalase protein expression was 83.1% in H9C2 cells. When the oligonucleotide was injected into the pericardial cavities of the SD rats on the 10th day, it inhibited 63.9% of the expression of renalase protein in the heart tissues.

**CONCLUSIONS** LV-Rnls-RNAi (19813-1) can be used to establish an optimal renalase low-expression model for the subsequent experiments.

**OTHERS**

**GW26-e2302**

Non-vitamin K Antagonist Oral Anticoagulants (NOACs) in Patients with Atrial Fibrillation and Heart Failure: A Systemic Review and Meta-analysis of randomized trials

Qinmei Xiong,1,2 Yeeecheng Lau,1 Keitaro Seno,1 Kui Hong,1 Gregory YH Lip1
1Cardiovascular department, the Second Affiliated Hospital of Nanchang University, Nanchang, China; 2University of Birmingham Centre for Cardiovascular Sciences, City Hospital, Birmingham, United Kingdom

**OBJECTIVES** The relative efficacy and safety of non-vitamin K antagonist oral anticoagulants (NOACs) against warfarin have been assessed for stroke prevention in atrial fibrillation(AF) in several clinical subgroups. However, no pooled analysis has been undertaken across the four landmark phase 3 randomized controlled trials (RCTs) to assess the effects of all NOACs against warfarin in the subgroup of patients with AF and heart failure (HF). We performed a systematic review and meta-analysis of RCTs to determine the relative efficacy and safety of NOACs against warfarin among subgroup patients with AF and HF. Additionally, we compared outcomes between AF patients with HF and without HF.