Conclusion Short-term use of CT-1C-terminal peptide early in reperfusion can reduce myocardial tissue injury and oxidative damage, as well as the extent of cardiomyocyte apoptosis, so that the extension of animal survival time; but the intraperitoneal injection of CT-1C-terminal peptide after a longer period of time reduced the tolerance of SD rats on ischaemia reperfusion injury, the tissue injury and the extent of oxidative damage increased significantly, and cardiac myocyte apoptosis have occurred in the surrounding area of infarction, and the animals have a shorter survival time.

**THE EFFECT OF DIABETES ON PROTECTION OF ISCHAEMIC POSTCONDITIONING IN MYOCARDIAL ISCHAEMIA-REPERFUSION INJURY**

Zhao Xin, Yu Xuefan, Quan Nanhu. Department of Cardiology, First Hospital of Jilin University, Changchun, China

Objective Study on the effect of diabetes on protection of ischaemia Postconditioning in myocardial ischaemia-reperfusion injury in isolated rat hearts.

Methods The type 2 diabetic rats were induced by the intravenous injection of streptozotocin (STZ) and high caloric diet. 60 Wister rats were divided into three groups randomly: Ischaemia- reperfusion in normal rats (A group), ischaemia postconditioning in normal rats (B group), ischaemia postconditioning in diabetic rats (C group). Rats were used for Langendorff isolated heart perfusion with 30 min of global ischaemia and 60 min of reperfusion, then the models of Ischaemia- reperfusion (A) were made. But to B and C, rat hearts were subjected to six cycles of 10 s of global ischaemia and 10 s of reperfusion as ischaemia postconditioning during the early minutes of reperfusion. The levels of lactate dehydrogenase (LDH) in the coronary effluent and infarction size was determined by TTC staining. Phosphorylation of akt and gsk-3β were analysed by western blotting and immunohistochemical staining.

Results Ischemic postconditioning reduced LDH, CK and improved the haemodynamic parameters and reduced myocardial infarction size (29.50±3.4% vs 45.65±4.8%), phospho-Akt and phospho-GSK-3β expression increased markedly in B group. But compared A group there were no parently difference in C group. The level of LDH, CK didn’t decline and the myocardial infarction size were not reduced. phospho-Akt and phospho-GSK-3β expression in C group is more less than in B group.

Conclusion Ischemic postconditioning may significantly protect myocardium from reperfusion injury in isolated normal rat hearts. But in diabetic rats, the protection of Ischaemic postconditioning has no effect, the mechanism of this phenomenon maybe connected with lower expression of Phosphorylation of Akt and GSK-3β in the condition of diabetic and impaired Reperfusion Injury Salvage Kinase (RISK) signalling pathway (RISK pathway).

**MMP-9 GENE POLYMORPHISMS CONTRIBUTE TO CORONARY ARTERY DISEASE RISK IN THE UIGHUR POPULATION OF CHINA**

Wang Lei, Ma Yitong, Yang Yining, Xie Xiang, Liu Fen. Department of Cardiovascular Medicine, The First Affiliated Hospital, Xi’an Jiaotong University Medical School, Xi’an, China

Background Matrix metalloproteinase-9 (MMP-9) plays a pivotal role in early atherosclerosis, vascular remodelling and development of atherosclerotic lesion. The potentially functional MMP-9 polymorphisms may contribute to the susceptibility of coronary artery disease (CAD). We aimed to investigate the association between three SNPs (−1562C>T, R279Q, R668Q) of the MMP-9 gene with CAD in the Uighur population of China.

Materials and methods 375 angiographic ally proven patients with coronary artery disease and 417 sex-matched and ethnically matched controls were genotyped for MMP-9 polymorphisms by the PCR-restriction fragment length polymorphism (PCR-RFLP) technique. Genotype/allele frequencies were compared in patients and controls using the χ² test. The relationship between the polymorphism of the MMP-9 gene and the severity of coronary arterial stenosis was analysed also.

Results At MMP-9 -1562 locus, there were significant differences between patients and controls (p<0.05), leading to significant OR for TT genotype (OR=2.93, CI 1.03 to 8.72) and R allele (OR=1.85,
CI 1.34 to 2.54). These ORs were higher in the sub-sample of smokers (3.87 and 2.06, respectively). Binary logistic regression analysis also confirmed that R allele carriers (CT and TT) have a higher risk of CAD (OR=2.07, CI 1.09 to 2.95). MMP-9 R279Q locus did not show significant differences between patients and controls. But QQ genotype and Q allele were significant risk factors in the smoker group. Q allele carriers (RR and QQ) were also significantly associated with CAD risk in the smoker group (OR=1.43, CI 1.13 to 1.226). The R668Q locus did not show significant differences between two groups. And the MMP-9 polymorphism may not be useful as a predictor of the severity of coronary atherosclerosis.

**Conclusions** MMP-9 -1562T allele and TT genotype are significantly associated with CAD patients from the Uighur Population of China (Xinjiang). This association was stronger in smokers, supporting the conclusion that an interaction between MMP-9 activity and smoking augments CAD risk. Further studies with larger sample size are warranted to confirm these associations in different populations.

**e0126** STUDY ON ANTI-OXIDATIVE FUNCTION OF FOUR KINDS OF SCHIZANDRAE LIGNANS

Sun Xin, Xie Yu, Chen Jiaqiang, Wang Qi, Tian Dan, Li Tan. Life Science Center, Beihua University, Beihua, China

**Objective** To study the anti-oxidative function of schisandrin A (SinA), schisandrinB (SinB), schisanholA (SolA) and schisandrin ester A (SesA).

**Methods** Using the method of the self oxidation method of pyrogallol, Fenton system.

**Results** The results shown that all of four kinds of schizandrae lignans have the inhibition function to Superoxide anion radical (O$_2^-$). SinB had the highest inhibition rate which could arrive at 68.74%; They also had the same inhibition to hydroxyl radical (OH) and SinB have the best effect.

**Conclusions** schisandrin A (SinA), schisandrin B (SinB), schisanholA (SolA) and schisandrin ester A (SesA) can be used as a natural anti-oxidation for human cardiovascular disease treatment and preventive health care.

**e0127** DETERMINATION OF PULMONARY ARTERY PRESSURE AND CARDIAC OUTPUT IN RAT

Ping Yuan, Rui Zhang, Dong Liu, Qianqian Liu. Shanghai Pulmonary Hospital, Tongji University, Shanghai, China

**Objective** To establish a method for determination of pulmonary artery pressure and cardiac output in rat.

**Methods** 20 Sprague-Dawely rats were randomly assigned into two groups: control group and pulmonary arterial hypertension (PAH) group. Rats in PAH group were received a single subcutaneous injection of mononocrotaline (60 mg/kg). The hand-made PE-50 catheters were inserted into pulmonary artery via right jugular vein, which we can perform mean pulmonary artery pressure. Similarly, cardiac output was detected through thermodilution method.

**Results** After 21 days, compared with control group, mean pulmonary artery pressure was significantly increased (17.4±1.5 mm Hg in control group vs 61.3±4.3 mm Hg in PAH group, respectively) and cardiac output was significantly decreased (130±5.8 ml/min in control group vs 71±6.7 ml/min in PAH group, respectively) in PAH group.

**Conclusions** This method is a simple and direct method to detect pulmonary artery pressure and cardiac output in rat.

**e0128** ANGIOTENSIN-(1-7) INHIBITS VASCULAR REMODELLING IN RAT JUGULAR VEIN GRAFTS VIA REDUCED ERK1/2 AND P38 MAPK ACTIVITY

1Wu Jingguo, 1Liang Yanbing, 2Tang Hao, 2Tang Anli, 1Ma Zhongfu, 1Ma Hong. 1The First Affiliated Hospital Sun Yat-sen University/Department of General Internal Medicine, Guangzhou, China; 2The First Affiliated Hospital Sun Yat-sen University, Department of Cardiology, Guangzhou, China

**Objectives** To evaluate the effects of Ang-(1-7) on vascular remodelling in vein grafts.

**Methods** A model of autologous jugular vein grafts in rats was established. With this model system, rats (n=12 per group) underwent autologous jugular vein graft transplantation (Ang-(1-7) and control groups), or a sham operation (sham group) in which grafting was not performed. Three days after operation, minipumps were installed for continuous infusion of Ang-(1-7) (25 μg/kg/h) or normal saline (control and sham groups) through the jugular vein.

**Results** Weeks 4, weight, blood pressure and heart rate were not significantly different between groups. Typical venous-graft hyperplasia, vascular remodelling, ERK1/2 activity, p38 MAPK activity and proliferating cell nuclear antigen (PCNA) and α-smooth muscle actin (α-SMA) expression present in the control group were attenuated by continuous Ang-(1-7) infusion. Tissue angiotensin II expression was increased in the Ang-(1-7) and control groups but was not different between the groups.

**Conclusion** The results of the present study indicate that exogenous Ang-(1-7) interferes with the vascular remodelling of autologous jugular vein grafts and significantly inhibits vein-graft intimal hyperplasia via inhibition of vascular tissue ERK1/2 and p38 MAPK activation. Thus, exogenous Ang-(1-7) improves the outcome of vein grafting via attenuation of vascular remodelling.

**e0129** EFFECT OF TETRANDRINE ON ANOxia/REoXYGENATION-INDUCED RELEASE OF PROINFLAMMATORY FACTORS IN CULTURED CARDIOCYTE OF NEOvATE RATS

Yuqin Wang, Yuqin Wang. The Pla 252 hospital

**Objective** To investigate the effect of tetrandra on anoxia/reoxygenation-induced release of myocardial enzyme LDH, CK and proinflammatory factors: TNF-α, IL-1β, IL-6 in cultured cardiocytes of neonate rats.

**Methods** After cardiocytes were cultured in vitro successfully, they were divided into four groups: control group (CON), anoxia/reoxygenation group (A/R), tetrandra group (Tet), simvastatin (Sim) in random. Each group was treated as follow: CON group - not treated anoxia/reoxygenation; A/R group - anoxia/reoxygenation was same to A/R group; Tet group - first anoxia incubate carried, cells were incubated in the non-saccharide non-serum culture medium, which saturate by 95% argon gases 2 h, reoxygenation incubate followed, cells were incubated in normal circumstance 24 h. 0.9% saline were added into culture fluid before the beginning of reoxygenation.

**Results** After 24 h, weight, blood pressure and heart rate were not significantly different between groups. The proinflammatory factors TNF-α, IL-1β, IL-6 were increased significantly in A/R, Tet and Sim groups compared with CON group (p<0.01). The LDH and CK in Tet and Sim group were lower significant than A/R group (p<0.01). 2. The proinflammatory factors TNF-α, IL-1β and IL-6 were increased significantly in A/R, Tet, and Sim groups compared with CON group (p<0.01). And it were lower significant than A/R