

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.

e0123 THE EFFECT OF DIABETES ON PROTECTION OF ISCHAEMIC POSTCONDITIONING IN MYOCARDIAL ISCHAEMIA-REPERFUSION INJURY

doi:10.1136/hrt.2010.208967.123

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 globe 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 globe 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-3 β 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 \pm 3.4% vs 45.65 \pm 4.8%), phospho-Akt and phospho-GSK-3 β 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-3 β 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-3 β in the condition of diabetic and impaired Reperfusion Injury Salvage Kinase (RISK) signalling pathway (RISK pathway).

e0124 EFFECTS OF OXIDATIVE STRESS AND GENDER DIFFERENCES IN SD RATS WITH HIGH-SALT HYPERTENSION VIA ACUTE SHORT-TERM COLD EXPOSURE

doi:10.1136/hrt.2010.208967.124

Lei Guangtao, Wu Qinghua. *Second Affiliated Hospital of Nanchang University, Nanchang, China*

Objective To perform high-salt hypertension model in SD rats and observe effects and oxidative stress and gender differences in SD rats, and then evaluate mechanism that blood pressure is affected by oxidative stress induced by cold environment.

Methods The male and female SD rats were randomly divided into four groups (n=8): male control group (MC), female control group

(FC), male high-salt group (MS), female high-salt group (FS), MC and FC were fed regularly, MS and FS were fed with diet composed of 8% salt. Feeding period was 8 weeks. Four groups were fed regularly in ninth week; in the first 10 weeks, four groups were put into a 4°C artificial climate box in tenth, 1 h per day. Systolic blood pressure (SBP) in SD rats was measured every other day from 1st week to in first 4 days 9th week with tail cuff. Systolic blood pressure in SD rats was measured daily with tail cuff in late 3 days of 9th week and 10th weeks. 24-h urine in each group was collected by biological metabolism, calculated accurately.

Results 1. High-salt diet for 8 weeks, MS group and FS group blood pressure was significantly higher than the control group the same sex (p<0.05). In 10th weekend four sets of blood pressure after cold exposure (BP) were higher, MS group and the FS group blood pressure Δ BP (Δ BP=before exposure BP-after exposure BP) significantly higher than the control group the same sex (p<0.01). 2. 8 week FS and MS 24 h urine volume, urinary mALB, urinary RBP, urine sodium, urine potassium excretion higher than that of the same sex control group (p<0.01); MS and FS groups showed no change in exposure; 3. After cold exposure high salt group 24 h urinary 8-iso-PGF2 α excretion compared with before the cold exposure was significantly higher (p<0.01), serum Ang II levels than before the cold increased and serum NO concentration decreased (p<0.05), while no change in the control group. Before and after cold exposure the MS and FS, MC compared with FC no gender differences emerged. 4. After cold exposure NADPH oxidase activity and SOD activity, MS compared with FS, MC compared with FC does not appear gender differences, but the gender of the high salt group was significantly higher (p<0.05).

Conclusion 1. High-salt diet increased blood pressure, and high-salt diet on blood pressure after high salt gender differences emerged; resume normal diet of high salt hypertensive rats have a certain recovery of renal function, blood pressure, but high salt blood pressure, gender differences still exist in blood pressure. Control group with the same sex, short-term acute cold exposure for high-salt hypertensive rats blood pressure increased significantly; 2. Cold high-salt hypertensive rats after exposure, oxidative stress increased; but male and female rats after exposure to cold and oxidative stress between the gender differences are not shown.

e0125 MMP-9 GENE POLYMORPHISMS CONTRIBUTE TO CORONARY ARTERY DISEASE RISK IN THE UIGHUR POPULATION OF CHINA

doi:10.1136/hrt.2010.208967.125

Wang Lei, Ma Yitong, Yang Yining, Xie Xiang, Liu Fen. *Department of Cardiovascular Medicine, The First Affiliated Hospital, Xinjiang Medical University, Urumqi, 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 χ^2 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,