Conclusions: Aggravated injury of coronary NR after myocardial IR in type 2 diabetes rats was associated with lower serum adiponectin levels, and exogenous administration of adiponectin could effectively alleviate NR injury in type 2 diabetic rats and improve cardiac function as well.

GW25-e3563
Role of late sodium current in ventricular arrhythmias caused by increased intracellular calcium concentration
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Objectives: Increase in intracellular calcium concentration is associated with prolongation of action potential duration (APD) and polymorphic ventricular tachycardia (PVT). Recent studies indicate that late sodium current (INa) is a key factor in calcium-mediated-cardiomyopathies, including long QT syndrome 8. The objective of the study was to determine the role of late sodium current in the calcium related ventricular arrhythmias, L-type calcium channel activator Bay-K 8644 will be used to increase the intracellular calcium concentration.

Methods: Hearts from New Zealand White female rabbits weighing 2.5-3.5 kg were isolated, perfused in a Langendorff mode with modified Krebs-Henseleit solution. The atrioventricular nodal area was thermally ablated to produce complete atrioventricular block, and then heart was paced at stated frequency. Multiple channel monophasic action potentials (MAP) and pseudo lead electrocardiograms (ECGs) were recorded.

Results: Bay-K 8644 (1-1000 ng/mL) increased both late and nondiastolic MAPD90 of left ventricle in concentration dependent manner, from (176±6) ms, and (201±6) ms to (246±6) ms (n=15, P<0.05 vs control), respectively. In the presence of ATX-II, Bay-K 8644 caused greater prolongation of MAPD90. Epi-MAPD90 was increased from (182±6) ms to (342±21) ms (n=9, P<0.05 vs control). The prolongation of MAPD90 caused by Bay-K 8644 was reversed by 1 M TTX in both absence and presence of ATX-II. In addition, the incidence of PVT evoked by Bay-K 8644 was also related to ATX-II. Bay-K 8644 at the concentration of 200 nM caused few arrhythmias in absence of ATX-II. In contrast, PVT occurred in 70 (77.8%) of hearts treated with 200 nM Bay-K 8644 in the presence of ATX-II. These arrhythmias could be abolished by 1 M TTX in the continued presence of Bay-K 8644.

Conclusions: Late sodium current contributes to the intracellular calcium-related ventricular arrhythmias. Inhibition of late sodium current may be effective in preventing or treating calcium overload-related ventricular arrhythmias.

GW25-e3525
The Expression of Stromal Interaction Molecule in Human Mesenteric Artery from Han Chinese Patients with Hypertension
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Objectives: Store operated calcium entry (SOCE) has been shown to contribute to the rise in intracellular calcium concentration (Ca2+ (2+)) (i) and associate with artery smooth muscle contraction. Stromal interaction molecule (STIM) is an essential member in SOCE. Whether it is affected in essential hypertension is presently unknown. The aim of this study was to measure the mRNA expression levels of STIM1 and STIM2 in hypertension and normal arterial pressure patients, but the difference was not significantly increased compared with normal arterial pressure patients.

Methods: Mesenteric arterial tissues were collected from the removed tissues by second people (which is usually discarded). Mesentery artery mRNA was collected, purified and stored at -80°C until use. The collection protocol was approved by the Ethics Committee of Lanzhou Medical College. In the present study, informed consent was obtained from the patients for the use of vascular tissue (which is usually discarded). Mesentery artery mRNA was obtained from 10 NT and 10 HT patients. The expression of miR-16 was measured using quantitative Real-time PCR, and the date was analyzed with 2^-ΔΔCt method. The statistical analysis was done using SPSS 17.0 T test.

Results: Average age of HT was 58.37±1.23, while it was 57.63±2.83 in NT. The STIM1 mRNA in hypertension patients showed an increasing trend compared with normal arterial pressure patients, but the difference was not significant (P>0.05). The STIM2 mRNA was significantly increased compared with normal arterial pressure patients (P<0.05). The expression level of STIM1 in HT was three times higher than those in NT.

Conclusions: The expression of STIM2 mRNA was significantly increased in essential hypertension patients. The increase of STIM mRNA expression level is likely to cause functional up-regulation in hypertension patients.

GW25-e0506
Effects of ischemic postconditioning on sizes of myocardial infarction induced by ischemia/reperfusion and TollR4 expression in rats
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Objectives: To observe the effects of ischemic postconditioning on the sizes of myocardial infarction induced by ischemia/reperfusion (IR) and expression of TollR4 in rats myocardium.

Methods: 48 rats were divided into four groups equally and randomly. Sham group: exposed the heart and without ligation of anterior descending (LAD) branch of left coronary artery (LCX) and IR group: Ligated the LAD for 30 minutes, later reperfusion 60 minutes. IPC group: ligated LAD to provoke the myocardial ischemia 30 minutes Firstly and reperfusion for 60 minutes later. IPC group: Ligated the LAD 30 minutes, and repeating the 1 minute/1 minute ischemia/reperfusion for 3 cycles, then reperfusion 60 minutes. After all the processes above, removed the hearts of the rats, and then the infarction sizes (IS) were measured with NBT dye, and the expression of TollR4 in myocardial tissue was investigated by immunohistochemistry method.

Results: Compared with the IR group, the IS was reduced significantly (P<0.05), and the expression of TollR4 increased significantly in IPC and IPC groups (P<0.05). There was no significant difference between IPC and IPC groups.

Conclusions: The postconditioning is as effective as preconditioning in reducing infarct size and the expression of Toll-R4 may be one of the mechanisms in reducing the infarction sizes.