specific enolase (NSE) before and at 3 day, 1 week, 2 week, 1 month, 2 months, 3 months after the operation.
Results: Dogs had significant higher levels of systolic blood pressure (SBP), diastolic blood pressure (DBP) and mean arterial pressure (MBP) compared to its baseline ($P<0.05$). The SBP, DBP and MBP in interventional group were significantly lower compared to the contral group on 1 month and 3 months after operation ($P<0.05$). Three months after the operation, renal angiography in all dogs drevealed no sign of renal artery stenosis. Plasma S-100B and NSE expression in interventional group were higher compared to control group at 3 day, 1 week, 2 week after operation ($P<0.05$).
Conclusions: Renal sympathetic denervation could significantly reduce the SBP, DBP and MBP in hypertensive dogs. The plasma concentration of S-100B and NSE may be used as one of indicator for assessment of renal nerve injury after renal sympathetic denervation.

GW25-e0563

Myocardial protection of Ginseng fruit saponins in streptozotocin-induced diabetic rats

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Objectives: To study the effect of endoplasmic reticulum stress in diabetic cardiomyopathy and the Therapeutic effects and its mechanism of ginseng fruit saponins.
Methods: 50 Wistar rats were randomly divided into control group (group C, n=10) ; Another 40 were fed with high fat and sugar for 4 weeks, then intraperitoneally injected with strept- ozotocin (STZ) [40mg/kg×4 weeks] to induce diabetes, 25 diabetic rats were randomly d- ivided into diabetic model group (group D, n=10) and ginseng fruit saponin group (group G, n=15, 40 mg/kg/D for 12 weeks), All rats were sacrificed and blood samples were collected for measuring fasting blood glucose,, total cholesterol (TC), triglyceride (TG), and myocardial enzymes (CK, CKMB, LDH) level. Tissue samples were dyed with Hemato- xylin-eosin (HE) for histopathological examination, Myocardial cell apoptosis detected by tunel method, the expressions of caspase12 protein were detected by Immunohistochemical detection.
Results: The levels of FBG, TC, TG in group D were significantly higher than those in group C (all $P<0.01$). The above indexes were significantly reduced with the treatment of ginseng fruit saponins compared with group D ($P<0.05$). The levels of CK, CK-MB and LDH in group D is significantly higher than group C ($P<0.01$), ginseng fruit saponins can significantly decrease the above indexes, the difference was statistically significant ($P<0.01$). In group C:Myocardial cell neatly and closely arranged, rich cytoplasm is rich and red, nucleus is located in the central of cells; No dissolution of muscle fiber, vacuoles degeneration and mono-nuclear cell infiltration.In group D: Disordered arrange ment of myocardial cell, the cytoplasm is distributed and relatively weak dyed. fiber breakage and irregular nucleus size were obivious. Myocardial cell abnormal conditions in group G were improved. Apoptotic cells were occasionally showed in group C, the myo cardial apoptosis index was (3.23 ±1.32) %, Apoptotic cells increased significantly in group D, the apoptosis index was (62.5±7.59) %, The apoptosis index of group G was (40.25±6.58) %, which decreas ed significantly compared with group D. Caspase-l2 protein expression in Group C is lower, group D rat myocardial the expression of caspase-12 protein present strong positive, Caspase-l2 protein expression in Group G is medium.
Conclusions: The endoplasmic reticulum stress may be involve in pathological processes of diabetic cardiomyopathy. Ginseng fruit saponins can protect myocardium, which may be associatedwith reduce myocardial cell apoptosis mediated by endoplasmic reticulum.

GW25-e0604

HO-1 attenuates intestinal ischemic injury secondary to MI-induced HF in rats

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Objectives: The development of heart failure (HF) is associated with myocardial remodeling after myocardial infarction (MI).HF reduces cardiac function and decreases splanchnic blood flow to the intestine, resulting in ischemia in the villi and damage to the intestinal barrier.HO-1 is a stress-inducible protein that exhibits potential anti-inflammatory effects and is known to be cytoprotective which has been indicated in “acute phase” during post ischemic incidence, both cardiac and intestinal, but rarely been reported in intestinal ischemic injury secondary to MI-induced HF, besides, over 2 months’ observation. So, we investigated the effect of HO-1 on intestine during HF in rats.
Methods: Heart failure rats (Wistar, male) were created by ligating left coronary artery (anterior descending branch). Heart failure was identified by an echocardiography result of EF (ejection fraction)<50%. The rats were divided into different experimental groups that received corresponding injections (MI: saline, MI+Copp: Copp solution, MI+SnMP: SnMP solution). The rats that did not undergo coronary ligation were assigned to the Control group. Echocardiophraphy was performed at baseline and 8 weeks postoperative to evaluate the cardiac function. Bacterial translocation incidence; mesenteric microcirculation; endotoxin in vein serum; the level of HO-1, Carbon Monoxide, nitric oxide, interleukin-10, TNF (tumor necrosis factor) -α in ileum; and the morphology of ileum were determined at 8 weeks postoperative.
Results: The MI+Copp rats recovered cardiac function, ameliorated mesenteric microcirculation and morphology change, lowered BT incidence, and reduced endotoxin in the serum and nitric oxide and TNF-α in the ileum while elevating HO-1, carbon monoxide and interleukin-10 levels in the ileum compared with MI ($P<0.05$). MI+SnMP rats exhibited an inverse result of that compared with MI ($P<0.05$).
Conclusions: HO-1 exerts a protective effect on the intestine during HF by inhibiting inflammation and ameliorating microcirculation through the carbon monoxide pathway. Furthermore, this protection may be independent of cardiac function recovery.

GW25-e0732

Effects of renal denervation on the development of post-myocardial infarction heart failure and cardiac autonomic nervous system in rats

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Objectives: Prior studies indicated Radiofrequency renal denervation (RD) had beneficial effects on post-myocardial infarction (MI) heart failure (HF) in rats. In this study we aimed to assess its effects on cardiac autonomic nervous system (CANS) which might be one of the most important mechanisms of RD’s therapeutic effect on post-MI HF and determine the best timing for RD.
Methods: One hundred Wistar rats were randomly assigned into five experimental groups: MI group (n=20), RD group (n=20), MI-1d+RD group (RD performed one day post-MI, n=20), MI-4w+RD group (RD performed four weeks post-MI, n=20), and N group (control group, n=20). MI was produced through ligation of the anterior descending artery. RD was performed through stripping of the renal nerves. The experimental design and implementation were conducted in accordance with animal welfare guidelines.
Results: Eight weeks post-MI, significant improvements were observed in both MI-1d+RD and MI-4w+RD groups compared to the MI group, that include (1) improved left ventricular (LV) function and hemodynamics with increased water and sodium excretion; (2) decreased plasma and renal tissue norepinephrine levels while tissue norepinephrine content increased in myocardium; (3) increased receptor in myocardium and improved heart rate variability; (4) decreased plasma renin, angiotensin II, aldosterone, BNP and endothelin levels. More therapeutic effects were found in the MI-1d+RD group than the MI-4w+RD group.
Conclusions: RD improves hemodynamics, decreases neuro-hormonal activations, modulates cardiac autonomic activities, and attenuates LV remodeling in HF. Early intervention appears to have greater beneficial effects on cardiac functional recovery and reverse remodeling after myocardial injury. Circulating neuro-hormones may be effective indicators to evaluate the therapeutic effect of RD on HF. Our data suggested that RD is a safe, non-pharmaceutical treatment of HF after cardiac injury, with unique benefits in stabilizing cardiac autonomic activity and remodeling post-MI.

GW25-e0743

Effects of Astragalus Polysaccharides on the expression of SR-BI, LXRα in RAW264.7 macrophage-derived foam cells

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Objectives: To study the effects of astragalus polysaccharides (APS) on the expression of SR-BI, LXRαin RAW264.7 macrophage-derived foam cells.
Methods: The mouse RAW264.7 cells were induced into foam cells, then we applied red oil O staining technique to appraise the foam cells. The RAW264.7 macrophage-derived foam cells were treated with APS at different concentrations. The expression of SR-BI, LXRαmRNA and protein was determined by RT-PCR and ELISA.
Results: The macrophage cells were differentiated into foam cells after 48 hours by ox-LDL. Compared with the control group, treatment of RAW264.7 macrophage-derived foam cells with different concentrations of APS upregulated the expression of SR-BI mRNA and protein in RAW264.7 cells in a dose-dependent manner ($P<0.05$). Compared with the control group, treatment of RAW264.7 macrophage-derived foam cells with different concentrations of APS upregulated the expression of LXRαmRNA and protein in RAW264.7 cells in a dose-dependent manner ($P<0.05$).
Conclusions: The mouse RAW264.7 cells were differentiated into foam cells after 48 hours by ox-LDL, and the concentration of intracellular lipid increased. APS may enhance the efflux of intracellular cholesterol by upregulating SR-BI, LXRαexpression in RAW264.7 cells.