

Conclusions Plasma endothelins level and ratio of thromboxane B₂ to 6-Keto-PGF_{1α} increased in the patients with primary hyperlipidaemia. Xuezhikang not only effectively adjusted blood lipids level but also reduced plasma endothelins level and ratio of thromboxane B₂ to 6-Keto-PGF_{1α}.

e0670 THE POTENTIAL ROLE OF SERUM CYSTATIN C FOR RENAL FUNCTION EVALUATION OF VERY OLD PATIENTS WITH CHRONIC KIDNEY DISEASE

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Objective To evaluate the potential role of Serum Cystatin C (Scys) for glomerular filtration rate (GFR) of very old patients with chronic kidney disease (CKD).

Methods 50 male CKD patients who were above 75 years old in our hospital were selected for detecting GFR by nephrogram using ^{99m}Tc-DTPA. Meanwhile, the concentrations of serum creatinine (Scr) and Scys were tested. eGFR were calculated by the equations of Cockcroft-Gault (CG), simplified Chinese Modification of Diet in Renal Disease equations for Scr, and the equations of Hoek, Le Bricon for Scys respectively. The results were analysed statistically.

Results All patients were diagnosed to CKD stage 3 to stage 5 according to the results of GFR by nephrogram. The concentration of Scys was not effected by age, weight and height ($p>0.05$), and the average concentration of Scys had significant difference among stage 3, 4, and 5 of CKD patients ($p<0.05$). For Scys and the equations of Hoek and Le Bricon, their correlation coefficients to GFR were higher than those of Scr and the equations of CG, Chinese simplified Modification of Diet in Renal Disease in stage 5 CKD patients, but lower in stage 3 and 4 CKD patients ($p<0.05$).

Conclusions The evaluation accuracy of GFR using Scys were not concordant in different stage of very old CKD patients. Whether Scys was the better marker for evaluating GFR of very old CKD patients needed future researching.

e0671 THE THERAPEUTIC EFFECTS OF COMPLEX DASHEN ZHUSHEYE TO THE RENAL DYSFUNCTION AFTER NEONATAL ASPHYXIA

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Objective To explore the therapeutic effects of complex Danshen Zhushaye to the renal dysfunction after neonatal asphyxia.

Methods To collect the clinical data of 80 cases of neonatal renal dysfunction after asphyxia and divide them into Danshen group and control group randomly. The complex Danshen Zhushaye was used in the Danshen group with the dose of 4 ml in term infants and 2 ml in preterm infants, intravenous drip, once per day, from day 3 after birth till day 10 after birth. The other treatments in two groups were similar. The urine outputs were recorded from the first day after birth till the day when urine outputs were normal. Blood urea nitrogen (BUN) and serum creatinine (SCr) were detected at day 3 and day 10.

Results The differences of urine outputs, BUN and SCr in two groups at day 3 were not significant. At day 10, compared with day 3, the urine outputs were increased and the BUN and SCr were decreased in both groups. The urine outputs were (2.61 ± 1.05) ml/kg·h⁻¹ and (2.50 ± 1.12) ml/kg·h⁻¹, BUN were (3.35 ± 1.12) mmol/l and (6.55 ± 2.21) mmol/l and SCr were (66.51 ± 8.11) μmol/l and (100.31 ± 8.98) μmol/l in Danshen group and control group respectively

at day 10. Compared with the control group, the BUN and SCr were decreased in Danshen group with $p<0.01$ at day 10. The day that the urine outputs were normal was 5.02 ± 1.00 (3~7) days in Danshen group and 7.12 ± 2.11 (5~10) days in control group. The difference was highly significant with $p<0.01$.

Conclusion The recover time was earlier with Danshen treatment in neonatal renal dysfunction after asphyxia, which can hint that the complex Danshen Zhushaye is effective to protect the renal function after neonatal asphyxia.

e0672 TREATMENT OF ATHEROSCLEROTIC RENAL ARTERY STENOSIS INVOLVING RENAL ARTERY BIFURCATIONS

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Objective To investigate the efficacy of kissing stent or kissing balloon technique for renal artery bifurcation with atherosclerotic renal artery stenosis.

Methods There were five patients included, who were with atherosclerotic renal artery stenosis involving renal artery bifurcation.

Results The reference vascular diameter of main renal artery was 5.6 ± 0.4 mm. The reference vascular diameter of renal artery distal to bifurcation were 3.4 ± 0.4 mm and 3.6 ± 0.5 mm. Kissing balloon technique was used in three patients with obvious residual stenosis, and kissing stent technique was used in two patients without obvious residual stenosis. Blood pressure was lowered in two patients, unchanged in three patients. Serum creatine was lowered in one patient.

Conclusion As for angiographic residual stenosis, it seems that kissing stent technique is more efficacious than kissing balloon technique.

e0673 STENT IMPLANTATION BEFORE CARDIAC SURGERY WITH CARDIOPULMONARY BYPASS HAS NO EFFECT ON IMPAIRED RENAL FUNCTION IN PATIENTS WITH RENAL ARTERY STENOSIS

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Objective To investigate whether stent implantation before cardiac surgery with cardiopulmonary bypass (CPB) have any effect on the development of impaired renal function in patients with renal artery stenosis (RAS).

Methods In this retrospective study, 69 patients with RAS were included, among whom there were 38 patient receiving renal artery stent implantations just before CPB. To assess acute kidney injury (AKI) after CPB, serum urea nitrogen (SUN), serum creatinine (SCr), creatinine clearance (CrCl) were recorded at baseline, at the end of operation, during the 1st and 2nd postoperative 24 h. Patients with abnormal SCr (>106 μmol/l) before cardiac surgery were not included in this study.

Results Baseline characteristics were similar between groups. Changes of SUN, SCr and CrCl were similar between groups. The incidences of AKI (22.6%, 26.3%) in patients without or with stent implantation were not significantly deferent from each other. In patients without stent implantation, AKI defined by RIFLE occurred in 7 (22.6%) patients: 5 (16.1%) with class R, 2 (6.5%) with I, and no patients with F. In patients with stent implantation, 10 patients (26.3%) had an episode of AKI during hospitalisation: 6 (15.8%) had RIFLE-R, 4 (10.5%) had RIFLE-I, and no patients had RIFLE-F.

Conclusion There is no data suggesting that stent implantation can improve the renal dysfunction after CPB. However, it cannot be concluded that RAS is not associated with AKI after CPB.

Related Subjects: Biomarkers and Laboratory Testing for Cardiovascular Disease

e0674 INSULIN INDUCES PHOSPHORYLATION OF NDRG2 THROUGH ACTIVATION OF AKT IN CARDIOMYOCYTES DURING TRANSIENT ISCHAEMIA/REPERFUSION

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Aims The protein kinase Akt mediates an important cell-survival signalling of insulin through inhibition of apoptosis post cardiac ischaemia/reperfusion (I/R) injury. As Ndr2 (N-Myc downstream-regulated gene 2) protein is one of Akt-mediated phosphorylation target in C2C12 skeletal muscle cell line, we evaluated whether insulin treatment could lead to Ndr2 phosphorylation through Akt activation in rat cardiac tissue or cultured primary cardiomyocytes.

Methods Male Sprague-Dawley rats underwent 30 min of ligation of the left anterior descending coronary artery, followed by reperfusion for various periods. Western blot was applied to detect total and phosphorylated Akt and Ndr2.

Results Our data showed that both Akt and Ndr2 phosphorylation were increased by 30 min of ischaemia alone compared to those of control group, then they were gradually reduced by following reperfusion, reaching their respective lowest levels after 3 h of reperfusion. In addition, insulin treatment resulted in significant enhancement of phosphorylated Ndr2 and Akt after 3 h of reperfusion. In vitro, insulin increased Ndr2 phosphorylation in cardiomyocytes in a wortmannin- and 1L-6-hydroxymethyl-chiro-inositol-2(R)-2-O-methyl-3-O-octa-decyl-carbonate (HIMO)-inhibitable manner, whereas cavtratin, a selective eNOS inhibitor, had no such effect, supporting a likely direct role for Akt.

Conclusions we first demonstrated in rat cardiomyocytes that Ndr2 phosphorylation level was modulated during transient I/R injury and could be enhanced by activation of Akt secondary to insulin treatment.

e0675 THE CLINICAL SIGNIFICANCE AND THE EXPRESSION OF N-TERMINAL PRO-BRAIN NATRIURETIC PEPTIDE IN PATIENTS WITH CHRONIC HEART FAILURE

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Objective To detect the N-terminal pro-brain natriuretic peptide (NT-proBNP) levels in patients with chronic heart failure, and to evaluate the difference of the levels in patients with chronic left and right heart failure.

Methods 1. 83 patients with chronic heart failure as the experimental group, and 25 patients without organic heart disease as the control group were included in the study. The patients in the experimental group were divided into left heart failure group (31 cases), right heart failure group (25 cases) and total cardiac failure group (27 cases), in which 25 patients of right heart failure group had chronic cor pulmonale, and the left heart failure and total cardiac failure group included 31 cases of coronary heart disease, 15 cases of hypertensive heart disease, 12 cases of heart valve disease. In the left heart failure and total cardiac failure group, the patients were further divided into three subgroups according to the classification of the New York Heart Academy (NYHA), including 17, 22 and 19 patients in Class II, III and IV, respectively; 2. Collected peripheral vein blood from each patient, and

assayed the plasma NT-proBNP, creatinine (CRE), blood urea nitrogen (BUN), uric acid (UA), triglycerides (TG), total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C) and high density lipoprotein cholesterol (HDL-C) by ELISA; 3. Evaluated the left ventricular ejection fraction (LVEF), left ventricular end diastolic diameter (LVEDD), right ventricular end diastolic diameter (RVEDD) and ventricular septal thickness (IVST) of these patients by echocardiography; 4. SPSS11.5 was used for statistical analysis, statistical significance was established at $p < 0.05$.

Results 1. The level of plasma NT-proBNP were 79.53 ± 36.77 pg/ml, 2076.95 ± 1024.32 pg/ml, 743.26 ± 152.82 pg/ml and 4815.52 ± 3165.98 pg/ml in the control group, the left heart failure group, the right heart failure group and the total cardiac failure group respectively ($p < 0.05$); 2. The NT-proBNP was significantly increased with the heart function deteriorated, as observed of 1018.16 ± 551.03 pg/ml, 2557.27 ± 1582.38 pg/ml, 6359.77 ± 2605.76 pg/ml, in the subgroups of NYHA Class II, III and IV, respectively, which were all significant greater than that in Group Control. 3. The plasma NT-proBNP level of chronic cor pulmonale (743.26 ± 152.82 pg/ml) was significantly lower than coronary heart disease (3670.48 ± 1619.55 pg/ml), hypertension (3404.78 ± 1056.10 pg/ml) and heart valve disease (2462.31 ± 1130.25 pg/ml) ($p < 0.05$); The plasma NT-proBNP level was no significant difference among coronary heart disease, hypertension and heart valve disease ($p > 0.05$); 4. The plasma NT-proBNP level was negatively correlated with LVEF ($r = -0.425$, $p < 0.05$), and positively correlated with BUN ($r = 0.231$, $p < 0.05$), CRE ($r = 0.405$, $p < 0.05$) and LVEDD ($r = 0.371$, $p < 0.05$), but had no correlation with age, UA, TC, TG, HDL-C, LDL-C, RVEDD and IVST ($p > 0.05$). Multivariate stepwise regression analysis demonstrated that the CRE and LVEF were the independent factors influencing the plasma NT-proBNP level.

Conclusions 1. The plasma NT-proBNP level of the patients with chronic heart failure was higher than normal, and the plasma NT-proBNP levels were significantly increased with the severity of cardiac function classification, and it is good at reflecting the abnormal of cardiac function. The plasma NT-proBNP level of the left heart failure was significantly higher than the right heart failure. Furthermore detecting the plasma NT-proBNP levels can distinguish between cardiac dyspnoea and pulmonary dyspnoea; 2. The plasma NT-proBNP level of the total cardiac failure group was significantly higher than the other groups. The plasma NT-proBNP level is important to detect serious heart failure. The CRE of total cardiac failure group was higher than other groups. The higher CRE suggests that patients of serious heart failure are often accompanied with a decline of renal function; 3. The plasma NT-proBNP level was negatively correlated with the LVEF, and positively correlated with the BUN, CRE and LVEDD. The CRE and LVEF are independent impact factors effecting the plasma NT-proBNP level.

e0676 VALUE OF SERUM ADIPONECTIN LEVEL IN ATRIAL FIBRILLATION PATIENTS AND CLINICAL SIGNIFICANCE

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Objective To investigate the level of plasma adiponectin (APN) in atrial fibrillation (AF) patients and clinical value.

Methods 1. 40 AF patients hospitalised in cardiology department in our hospital divided into two groups of paroxysmal and persistent (containing persistent and permanent AF) according AF guideline of ACC/AHA 2006. Control group comprised 15 patients admitted to hospital in Cardiology Department without AF. Plasma adiponectin level were measured and compared among the three groups. 2. All