

e0363 LEFT ANTERIOR DESCENDING ARTERY DISSECTION AND ACUTE MYOCARDIAL INFARCTION AFTER BLUNT CHEST TRAUMA: TWO CASE REPORT

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Blunt chest trauma can cause several forms of cardiac injury. of these, coronary artery dissection and acute myocardial infarction is a rare complication. We report two cases of the left anterior descending coronary artery dissection and acute myocardial infarction after blunt chest trauma.

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e0364 ASSESSMENT OF EFFECTS OF ENHANCED EXTERNAL COUNTERPULSATION ON SILENT MYOCARDIAL ISCHAEMIA AND LEFT VENTRICULAR DIASTOLIC FOUNDATION IN PATIENTS WITH CORONARY HEART DISEASE

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Objective To assess the efficiency of enhanced external counterpulsation (EECP) on silent myocardial ischaemic (SMI) and left ventricular diastolic function (LVDF) in patients with coronary heart disease.

Methods 78 cases of coronary heart disease were randomly into group A (39 cases) and group B (39 cases). The group B was treated with normal treatment aspirin, isosorbide mononitrate metoprolol and pavalstatin, the group A was treated with EECP based on the normal treatment for 4 weeks. The changes of myocardial ischaemia and cardiac function were observed by Dynamic ECG and Doppler echocardiography combination with tissue Doppler imaging (TDI) before and after treatment.

Results Frequency and sustained time of ST segment depression, and total loading of myocardial ischaemia were decreased significantly in two groups ($p < 0.01$ respectively) after treatment, but it decreased more significantly ($p < 0.01$) in group A than in routine group B. There was no obvious difference ($p > 0.05$) on the left ventricular systolic function (CO, EF) between the two groups after treatment. LVDF was reduced in patients of two groups before treatment. After treatment indexes of LVDF (E, A, E/A, DC, Ea, Aa, Ea/Aa, E/Ea) were improved (all $p < 0.01$) in the group A, while there were different ($p < 0.05$) in group B before and after treatment. However LVDF in group A was better ($p < 0.01$) than that of group B. No severe adverse effects found in treating with EECP.

Conclusion There has obvious therapeutic efficacy of EECP on SMI and LVDF in patients with coronary heart disease.

e0365 CLINICAL STUDY ON RELATIONSHIP BETWEEN SERUM GAMMA-GLUTAMYLTRANSFERASE AND CORONARY HEART DISEASE IN WOMEN

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Objective To study the relationship between serum gamma-glutamyltransferase (GGT) and coronary heart disease (CHD) in women.

Methods 636 patients (354 men, 282 women) undergoing coronary angiography were enrolled from March 2009 to November 2009 in

the department of cardiology, Shanghai Tenth People's Hospital, Tongji University. The various indicators of blood testing and clinical data were collected among 636 patients. According to the results of coronary angiography, men and women respectively divided into CHD group and non-CHD group. According to the level of serum GGT, men and women respectively divided into five grade groups (normal low, normal high, moderately elevated, elevated, highly elevated).

Results The serum GGT levels in CHD group were statistically different from those in non-CHD group in women ($p = 0.010$) but not in men ($p = 0.480$). More women had elevated serum GGT levels in CHD group than those in non-CHD group ($p = 0.009$, OR = 1.877), but this significant difference was not found in men ($p = 0.427$, OR = 0.829). The prevalence of CHD in women was significantly increased as serum GGT levels elevated ($p = 0.012$), but this trend was not found in men ($p = 0.369$). The levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST), direct bilirubin (DBIL), post prandial blood glucose (PBG) and the values of Ln triglycerides (LnTG) in women were positively correlated with the values of Ln serum GGT levels (LnGGT) separately, but levels of high density lipoprotein cholesterol (HDL-C) were negatively correlated with LnGGT. The levels of ALT, uric acid (UA), fasting blood glucose (FBG), total cholesterol (TC) and LnTG in men were positively correlated with the values LnGGT separately. Logistic regression indicated that serum GGT was independent risk factor of CHD in women (OR = 1.782, 95% CI 1.043 to 3.043, $p = 0.034$).

Conclusion (1) Serum GGT was correlated with morbidity of CHD in women. (2) The prevalence of CHD in women was significantly increased as serum GGT levels elevated. (3) The values of LnGGT were positively correlated with the levels of PBG and the values of LnTG in women, but negatively correlated with the levels of HDL-C. (4) Serum GGT was independent risk factor of CHD in women.

e0366 EFFECT OF THE COMPOSITE SALVIAE DROPPING PILL ON BLOOD LIPIDS AND LARGE ARTERY ELASTICITY IN PATIENTS WITH CORONARY HEART DISEASE OR CORONARY RISK FACTORS

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Objectives To investigate the effect of the composite salviae dropping pill on blood lipids and large artery elasticity in patients with coronary heart disease (CHD) or coronary risk factors.

Methods 63 patients with CHD or coronary risk factors were randomly divided into two groups: trial group ($n = 32$), received composite salviae dropping pill 10 pill three times a day in addition to routine therapy; control group ($n = 31$), treated with routine therapy. All subjects underwent laboratory measurements including the concentrations of serum total cholesterol (TC), triglyceride (TG), low density lipoprotein cholesterol (LDL-C), high density lipoprotein (HDL-C), fast blood sugar (FBS), and high sensitivity C-reactive protein (hs-CRP) before and 4, 24 weeks after the treatment. Carotid-femoral PWV (cfPWV), carotid-radial PWV (crPWV) and femoral-ankle PWV (faPWV) in both groups were measured by PP-1000 automatic PWV measuring system before and after the treatment.

Results There were no significant difference in the baseline parameters between two groups (all $p > 0.05$). After treatment for 24 weeks, there was a notable decrease of TG and hs-CRP levels in both two groups ($p < 0.05$ or 0.01) and TC and LDL-C levels in trial group ($p < 0.01$). After 24 weeks, the LDL-C level was lower in trial group than in control group ($p < 0.01$). 24 weeks later, cfPWV and faPWV were significantly lower in trial group than baseline and in

control group (all $p < 0.01$), but the difference of the crPWV in both groups was not significant in comparison with baseline (all $p > 0.05$).

Conclusions The composite salviae dropping pill, a traditional Chinese medicine, can decrease blood lipids and improve large artery elasticity in patients with CHD or coronary risk factors.

e0367 EFFECT OF TREATMENT OF HEPATOCYTE GROWTH-PROMOTING FACTOR ON IMPROVEMENT OF MYOCARDIAL ISCHAEMIA AND CARDIOPULMONARY FUNCTIONAL CAPACITY DURING THE EXERCISE IN PATIENTS WITH SEVERE CORONARY HEART DISEASE

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Objective To test the hypothesis that the treatment of hepatocyte growth-promoting factors (pHGF) by venous injection improves myocardial ischaemia, kinetics of oxygen uptake (VO_2) and cardiopulmonary functional capacity during exercise in patients with severe coronary heart disease.

Methods 58 patients enrolled for a two week treatment period were divided into pHGF group (30) and control (28). Treadmill graded exercise tests with gas analysis were conducted before and after treatment to evaluate the changes of cardiorespiratory function and myocardial ischaemia. LVEF was measured by ultrasound cardiography.

Results The degree of exercise-induced ST segment depression (ΔST) were decreased significantly and HRmax and HRmax/ ΔST increased significantly in pHGF group. Compared to the control, total exercise time were prolonged more significantly and total exercise time/ ΔST and total work load were also increased more significantly in pHGF group. Maximal heart rate, VO_2 peak and anaerobic threshold (AT) were increased more significantly in pHGF group than in control. Peak oxygen pulse was improved also significantly by 1.09 ml/beat in pHGF group. But there are no changes of LVEF in both group.

Conclusions The treatment of pHGF by venous injection improves favourably myocardial ischaemia during exercise, improves VO_2 and AT further and enhances their exercise capacity on the basis of conventional medication.

e0368 EVALUATION OF THE EFFECT ON THE MANAGEMENT OF PATIENTS SUFFERING FROM CORONARY ATHEROSCLEROTIC HEART DISEASE COMBINED WITH CHRONIC HEART FAILURE

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Objective To study the effect on the management of patients suffering from coronary atherosclerotic heart disease combined with chronic heart failure.

Method 1109 patients who discharged from our department were enrolled randomly. These patients were ranked as the manage group and control group. Patients in manage group accepted standardised management out of hospital, regular health education, and were followed up in the form of telephone and outpatient visit.

Result Compared with the control group, the manage group showed the lower rate of all cause of death, cardiac death and readmission due to cardiovascular events (CVE), declined by 32.0%, 36.5% and 58.4% respectively. All cause of death, cardiac death and readmission

due to CVE in manage group had significantly negative correlation with the years of death. But there was no ascendancy in reducing the rate of stroke and myocardial infarction.

Conclusion Through standardised management out of hospital, patients who were suffering from coronary atherosclerotic heart disease combined with chronic heart failure got significant benefit in reducing the rate of all cause of death, cardiac death and readmission due to CVE, and survival rate of patients was improved.

e0369 EXTRACORPOREAL CARDIAC SHOCK WAVE THERAPY PROMOTES ANGIOGENESIS AFTER ACUTE MYOCARDIAL INFARCTION IN PIGS EVALUATED BY REALTIME MYOCARDIAL CONTRAST ECHOCARDIOGRAPHY

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Objective To evaluate the effect of neovascularization of extracorporeal cardiac shock wave therapy in a porcine model in vivo.

Methods Acute myocardial infarction was created by balloon occlusion of left anterior descending coronary artery and two different groups were divided ($n=5$ each). Real-time myocardial contrast echocardiography was performed before infarction and 1 day, 1 month after infarction. In the group A, the shock wave therapy was started 3 days after acute myocardial infarction and applied 9 sessions on 4 segments with low energy (0.09 mJ/mm^2) at 200 shoots/spot for 9 spots ($-1 \sim 0 \sim +1$ combination) within 1 month and the group B was the control group.

Results Within 1 month follow-up, the death rate was 20% and 40% in 2 groups respectively. Neither arrhythmias nor other complications were observed during or after the shock wave therapy. Before infarction, there was no significant differences of regional blood flow valued by A-K on target segments between two groups. After infarction, followed at 1 day and 1 month, A-K decreased significantly before and after self control in both groups ($p < 0.05$). In the group A, A-K was higher on 4 segments compared with the group B ($p < 0.05$), and the blood perfusion of the middle region improved better than that of the apex region (86.57% vs 65.54%). Whereas the group B had little change.

Conclusion These results suggest that our extracorporeal cardiac shock wave therapy is a safe, non-invasive treatment in promoting angiogenesis that was associated by a substantial increasing of the regional blood perfusion in a porcine model of acute myocardial infarction.

e0370 RELATION OF CARDIOVASCULAR RISK FACTORS TO LEFT VENTRICULAR GEOMETRIC REMODELLING IN YOUNG ADULTS

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Objective It is well known that left ventricular (LV) structural alterations were associated with increased cardiovascular risk factors in a middle-aged and older population; however, cardiovascular risk factors are more prevalence in young adults and strongly associated with adverse LV geometry. The aim of this study was to determine the cardiovascular risk predictors of LV geometric remodelling in a population of young adults.

Methods 515 subjects were selected for this study (age range 23–45 years, average 35; 64% men). LV structure was measured by a two-dimensional guided M-mode echocardiography. Normal geometry, concentric remodelling, eccentric and concentric hypertrophy