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 compositie 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 (VO2) 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 significantlyand 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 ascendency 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 ($-1\sim0\sim+1$ 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 purfusion 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

were defined by LV relative wall thickness and LV mass indexed to height (gram/height in m2.7). Multivariable logistic regression analyses were performed to define young adulthood determinants of LV geometric patterns.

Results The prevalence of normal geometry, concentric remodelling, eccentric and concentric hypertrophy were 79.0%, 7.6%, 8.7% and 4.7% respectively. Males showed significantly higher prevalence for concentric remodelling and eccentric hypertrophy than females (5.6% vs 2.0% and 6.4% vs 2.3%, p<0.01), however such differences were not noted for normal geometry and concentric hypertrophy (p>0.05). Using the normal geometry group as reference, individuals with eccentric and concentric hypertrophy showed significantly higher levels of BMI (36.3 kg/m^2 and 38.6 kg/m^2 vs 27.2 kg/m^2, p<0.001), SBP (127.5 mm Hg and 137.2 mm Hg vs 114.7 mm Hg, p<0.001), DBP (85.2 mm Hg and 89.7 mm Hg vs 73.5 mm Hg, p<0.01), glucose (111.2 mg/dl and 129.3 mg/dl vs 85.2 mg/dl, p<0.01), DM (24.3% and 41.6% vs 4.3%, p<0.001) and triglycerides (156.8 mg/dl vs 128.5 mg/dl, p<0.001) and total/HDL-C ratio (4.9 vs 4.1, p<0.01) were higher significantly in eccentric hypertrophy only. However, none of these risk factors differed significantly between normal geometry and concentric remodelling groups (p>0.05). In Multivariable logistic regression models age, gender, BMI, SBP, DBP, glucose, DM, triglycerides and total/HDL-C ratio, male gender was related to concentric remodelling hypertrophy (OR=2.63, 95% CI 1.21 to 5.64, p=0.019), BMI was related to eccentric hypertrophy (OR=1.162, 95 % CI 1.08 to 1.20, p<0.001) and DM was related to concentric hypertrophy (OR=6.354, 95% CI 3.24 to 35.0, p=0.002).

Conclusions These findings showed that eccentric hypertrophy and concentric hypertrophy were more frequent and male gender, obesity and DM were significant determinants of these patterns of adverse cardiac remodelling in young adults.

e0371 THE EFFECT OF ALDH2 GENETIC POLYMORPHISM ON MYOCARDIAL ISCHAEMIA REPERFUSION INJURY IN CHINESE

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Background Recently, several animal studies investigated the relation between ALDH2 and cardiac ischaemia /reperfusion injury, but the results were controversial. Meanwhile, no relevant researches on population have been reported. And It is well known that acetaldehyde dehydrogenase 2 (ALDH2) has a significant variation in a single-nucleotide polymorphism of so-called G487A polymorphism in Asian, where the mutant allele is carried by nearly 50% of east Asians which has significant reduced or completely lost catalytic activity than people with ALDH2*1/*1 genotype.

Objective To investigate the association between ALDH2 G487A polymorphism and myocardial ischaemia/reperfusion injury in Chinese.

Methods We serially measured the release of troponin I (cTNI) and creatine kinase MB (CKMB) in 148 patients with acute myocardial infarction. The extent of cardiac injury was divided into two categories, the larger one of which is determined when the peak level of myocardial enzymes exceeded 30ng/ml and 80mg/ml for cTNI and CKMB respectively. Meanwhile, ALDH2 genotype was detected as well as other clinical parameters. Logistic regression analysis was used to analyse the association between the ALDH2 genotypes and myocardial ischaemia /reperfusion injury.

Results In 146 patients with acute myocardial infarction whose myocardial injury was estimated by cTNI (p=0.040) and in patients with STEMI undergoing PCI whose myocardial injury was estimated by cTNI (n=72, p=0.018)and CKMB (n=67, p=0.035) respectively, the proportion of individuals with mutant allele was higher in patients with smaller injury than in that with larger. ALDH2 genetic mutation may be an independent protective factor for patients with acute myocardial infarction undergoing PCI (OR 0.264, p=0.034) and patients with STEMI undergoing PCI (OR 0.264, p=0.034) when injury was assessed by cTNI but not CKMB.

Conclusions ALDH2 G487A polymorphism is possibly associated with myocardial ischaemia/reperfusion injury in Chinese. ALDH2 geneic mutation (G487A) may confer independent cardioprotection in patients with acute myocardial infarction undergoing PCI and those with STEMI undergoing PCI.

e0372 POST-OPERATIVE OBSERVATION OF THE SAFETY AND ANGIOGENESIS EFFECT OF DIRECT CURRENT STIMULATION IN A MYOCARDIAL INFARCTION RABBIT MODEL

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Introduction The purpose of the current study was to evaluate the safety of low voltage direct current (DC) electric stimulation and its angiogenesis effect in a rabbit myocardial infarction (MI) model with electrodes directly fixed on the epicardium.

Materials and methods 28 Japanese white rabbits were randomly divided into control and treatment groups with 14 rabbits in each group. MI was induced by left anterior descending (LAD) artery ligation. A pair of platinum electrodes was directly placed on the ambilateral epicardium next to the LAD artery. Low voltage DC electric stimulation (4.0 V/cm, 60 min/day) was given to the treatment group immediately following the surgery until the 4th week post-operation. Parameters including blood routine, biochemistry, cardio and respiratory, pathology and immunohistochemisty from both groups were monitored throughout the experiment. Capillary density was counted at the end of the experiment.

Results The overall mortality rate was 7.1%, pneumothorax rate was 3.6%, and the intraoperative arrhythmia rate was 7.1%. Transient hypotension, anaemia, leucocytosis, hypoxaemia and slight increase of the myocardium enzyme were observed in both control and treatment groups. Except minor inflammatory cell infiltration and mild hyperaemia, there was no other adverse response observed on the myocardium caused by electric thermal effect. The capillary density in the treatment group (140.7±21.5) was significantly higher than that of the control group (60.3±21.7) (p<0.001) at the end of the experiment.

Conclusion It is safe to apply low voltage DC electric stimulation to the MI rabbits in addition to promote the myocardium angiogenesis.

e0373 INTRAVASCULAR ULTRASOUND STUDY ON ANGIOGRAPHIC CONTRAST MATERIEL DRAIN-LAGGED CORONARY SEGMENTS

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Introduction To investigate the structural characteristics and its clinical significant of angiographic contrast materiel drain-lagged coronary segments.