coronary arteries were assessed by Gensini scoring system. The fasting serum concentrations of CatS and CysC were measured before angiography respectively. The SPSS11.0 system was applied to analyse the data. Compared with controls, serum levels of cathepsin S in CAD groups increased significantly and demonstrated positive correlation (r=0.69, p=0.0001) with Gensini score. After being corrected for other common factors (age, sex, blood pressure and blood lipid, etc) by multivariate stepwise regression analysis, this relationship also existed.

Conclusions Serum levels of cathepsin S are associated with severity of athero sclerotic lesions of coronary arteries. The higher serum levels of cathepsin S are, the severer atherosclerotic lesions of coronary arteries are.

**Result**

7 (23.3%) showed the abnormal phenomenon that CK-MB:CK ratio over 25%, and the 30 subjects, 10 (33.3%) had increased total CK activity, and 6 (20.0%) had increased CK isoenzyme. The biochemical laboratory from April 2002 to April 2010 according to clinical and laboratory features of individuals with micro creatine kinase type 1 (MCK-1), and to evaluate the clinical significance of these cases who expressed serum MCK-1.

**Methods** To screen MCK-I individuals from serum samples in our biochemistry laboratory from April 2002 to April 2010 according to both increasing CK-MB activity and CK-MB/CK ratio over 25%, and finally confirmed by agarose gel electrophoresis of CK isoenzyme analysis. To analyse the clinical and laboratory data of individuals who expressed serum MCK-I isoenzyme.

**Results** MCK-1 was detected in the samples in 30 subjects. Their mean age at the initial presentation was 55.6 years (range 26 to 81), 65.5% were female (n=19), and 34.5% (n=11) had hypertension. of the 30 subjects, 10 (33.3%) had increased total CK activity, and 7 (23.3%) showed the abnormal phenomenon that CK-MB:CK ratio was >1. Our study indicated that the misdiagnostic rate was 40.0 % (n=12), and the rate of missed diagnosis was 46.7% (n=14). There were 3 deaths during the follow-up period.

**Conclusion** MCK-1 was not rare in clinical practice. Among the conditions in which CK-MB activity is elevated in the absence of myocardial injury or infarction using immuno inhibition methods, MCK-1 merits special attention from clinicians. CK-MB index is a simple and rapid screening test for MCK-1.

**e0396 CLINICAL ANALYSIS OF 30 INDIVIDUALS WITH MICRO CK TYPE 1**

**Objective** The aim of the prospective study was to investigate the clinical and laboratory features of individuals with micro creatine kinase type 1 (MCK-1), and to evaluate the clinical significance of these cases who expressed serum MCK-1.

**Methods** To screen MCK-I individuals from serum samples in our biochemistry laboratory from April 2002 to April 2010 according to both increasing CK-MB activity and CK-MB/CK ratio over 25%, and finally confirmed by agarose gel electrophoresis of CK isoenzyme analysis. To analyse the clinical and laboratory data of individuals who expressed serum MCK-I isoenzyme.

**Results** MCK-1 was detected in the samples in 30 subjects. Their mean age at the initial presentation was 55.6 years (range 26 to 81), 65.5% were female (n=19), and 34.5% (n=11) had hypertension. of the 30 subjects, 10 (33.3%) had increased total CK activity, and 7 (23.3%) showed the abnormal phenomenon that CK-MB:CK ratio was >1. Our study indicated that the misdiagnostic rate was 40.0 % (n=12), and the rate of missed diagnosis was 46.7% (n=14). There were 3 deaths during the follow-up period.

**Conclusion** MCK-1 was not rare in clinical practice. Among the conditions in which CK-MB activity is elevated in the absence of myocardial injury or infarction using immuno inhibition methods, MCK-1 merits special attention from clinicians. CK-MB index is a simple and rapid screening test for MCK-1.

**e0396 A STUDY THE RELATION OF ACE GENE POLYMORPHISMS AND RISK FACTOR WITH CORONARY HEART DISEASE IN HAINAN LI AND HAN NATIONALITY**

**Objective** To probe into the relation of the ACE gene polymorphisms and the risk factor with coronary heart disease (CHD) in the Hainan Li and Han nationality.

**Methods** Used the PCR to detect the polymorphisms of ACE gene insertion/deletion (I/D) in 150 patients with CHD and 150 healthy people from Hainan Li and Han nationality. The genotype frequencies and allele frequencies of DD, DI and II were 24.0%, 42.0%, 44.0% respectively, and the allele frequencies of D and I were 41.0% and 59.0%. In the healthy control of Hainan Li nationality, the genotype frequencies of DD, DI and II were 14.0%, 44.0%, 42.0% respectively, and the allele frequencies of D and I were 36.0% and 64.0%. There were significant differences both in the genotype frequencies of DD, DI and II, and in allele frequencies D and I between these two groups (p<0.05). There were no significant differences in the age, the blood pressure, the body mass index (BMI), the total serum cholesterol (TC) and the low density lipoprotein cholesterol (LDL-C) between these two groups (p>0.05). There was no significant differences in the sex between these two groups (p>0.05).

**Conclusions** There were notable correlation between the ACE gene I/D polymorphisms and the CHD in Hainan Li nationality. The ACE gene polymorphisms are the major gene that causes CHD in Hainan Li nationality. It may be the independent risk factor in CHD in Hainan Li nationality. So it is very important to intervene with ACEI inhibitors or angiotensin receptor blockers (ARB) in the early stage of CHD.

**e0397 A CORRELATIONAL STUDY OF ACE GENE POLYMORPHISMS WITH CORONARY HEART DISEASE (CHD) IN THE HAINAN LI NATIONALITY**

**Objective** To study the correlation of the ACE gene polymorphisms with coronary heart disease (CHD) in the Hainan Li nationality.

**Methods** Used the PCR to detect the polymorphisms of ACE gene insertion/deletion (I/D) in 150 patients with CHD and 150 healthy people from Hainan Li nationality. The genotype frequencies and allele frequencies of DD, DI and II were 24.0%, 42.0%, 44.0% respectively, and the allele frequencies of D and I were 41.0% and 59.0%. In the healthy control of Hainan Li nationality, the genotype frequencies of DD, DI and II were 14.0%, 44.0%, 42.0% respectively, and the allele frequencies of D and I were 36.0% and 64.0%. There were significant differences both in the genotype frequencies of DD, DI and II, and in allele frequencies D and I between these two groups (p<0.05). The multiple logistic regression analysis showed that the triglyceride (TG) level in the CHD group was significantly higher than in the control (p<0.05) and the high density lipoprotein cholesterol (HDL-C) level in the CHD group was significantly lower than the control (p<0.05).

**Conclusions** There were notable correlation between the ACE gene I/D polymorphisms and the CHD in Hainan Li and Han nationality. The ACE gene polymorphisms are the major gene that causes the
CHD in Hainan Li and Han nationality. The higher TG level and the lower HDL-C level may be the risk factor in Hainan Li and Han nationality.

**Objective** To explore the significance of the ACE gene insertion/deletion (I/D) polymorphism in peoples of Hainan Li and Han nationality with coronary heart disease (CHD).

**Methods** Used the PCR to detect the polymorphisms of ACE gene insertion/deletion (I/D) in 150 patients with CHD and 150 healthy people from Hainan Han and Li nationality respectively. Observed the genotype frequencies and allele frequencies of DD, DI and II. Specific PCR detection was performed for patients who have been determined as DD by normal PCR to reduce misclassification rate. Meanwhile detected the blood lipid, the lipoprotein, the blood pressure, the blood sugar in all people. Used the multiple regression analysis to find out the risk factor in CHD patients.

**Results** The genotype frequencies of DD in the CHD group of Han and Li nationality are significantly higher than the control group of Han and Li (p<0.05). There were no significant differences in the genotype frequencies of DD, DI and II between the Han and Li with CHD. By the multiple regression analysis it shows: the genotype frequencies of DD in the CHD group of Han and Li nationality increased, the high density lipoprotein cholesterol (HDL-C) level in the CHD group of Han and Li nationality decreased. The triglyceride (TG) level in the CHD group of Han nationality increased.

**Conclusions** The genotype frequencies of DD are associated with CHD. The susceptibility of CHD in Han and Li nationality is the same. Increasing the HDL-C level can protect the CHD patients. The high level of TG is the independent risk factor in Hainan Han people with CHD.

**Mobilise autologous bone marrow stem cells to repair infarcted myocardium**

**Objective** Autologous bone marrow stem cells were mobilised and released by cytokines. On the basis of homing and injured microenvironment theories, we investigated the effective reparation of situ transplantation for acute myocardial infarction in rats.

**Methods** (1) We divided 60 Wistar rats into situ transplantation group and control group. To duplicate rat acute myocardial infarction model by injection of drug; CK, LDH level were checked by automatic biochemistry analyser; (2) 30 Wistar rats were injected rhG-CSF 50 μg/kg/day; (3) We did a control analysis on pathological section between two groups by histological staining technique and fluorescence imagine system. There was a same trend of variability of [Ca2+]i changes between cardiac-like myocytes from bone marrow mesenchymal stem cells and cardiac myocytes. It shows that some common electrophysiological characteristics exist in cardiac-like myocytes and cardioamyocytes.

**Changes of intracellular calcium concentration in cardiac-like myocytes**

**Objective** To study the effects of verapamil, endothelin on [Ca2+]i in cardiac-like myocytes derived of bone marrow mesenchymal stem cells.

**Methods** (1) Bone marrow mesenchymal stem cells and cardiac myocytes were cultured by primary method; (2) Bone marrow mesenchymal stem cells differentiated into cardiac-like myocytes by S-azacytidine induction agent; (3) We divide our test into three groups, including the first generation bone marrow mesenchymal stem cells, cardiac-like myocytes and cardiac myocytes; (4) The alteration of [Ca2+]i, affected by verapamil, endothelins was observed with [Ca2+]i fluorescence imagine system in bone marrow mesenchymal stem cells, cardiac-like myocytes and cardiac myocytes.

**Results** (1) Cardiac myocytes were set up through trypsogen digestion method; (2) The alteration of [Ca2+]i, affected by verapamil was observed with [Ca2+]i fluorescence imagine system. There was a same trend of variability between cardiac-like myocytes and cardiac myocytes, but no changes in bone marrow mesenchymal stem cells; (5) The alteration of [Ca2+]i, affected by endothelin was observed with [Ca2+]i fluorescence imagine system. There was a same trend of variability that fluorescence intensity gradually strengthened with intervention time extended.

**Conclusions** After affected by verapamil and endothelins, there was a same trend of [Ca2+]i changes between cardiac-like myocytes from bone marrow mesenchymal stem cells and cardiac myocytes. It shows that some common electrophysiological characteristics exist in cardiac-like myocytes and cardioamyocytes.