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.

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, endothelin was observed with [Ca2+]i fluorescence image 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 image 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 image 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 cardiomyocytes.
The subgroup 6 was patient with diabetes plus hypertension. The expression of mRNA level were identified by Real-time RT-PCR.

**Results** The ratios of VDUP1/β-Actin of two groups were skewed distribution. In CAD group, the maximum was 630.346, the minimum was 1.000, the median was 5.205. In control group, the maximum was 857.532, the minimum was 2.395, the median was 80.449. By logarithmic transformation, the results indicated the expression of VDUP1 in FBCMs from patients with CAD were markedly down-regulated than that from control group (p<0.05). The expression of VDUP1 in FBCMs from patients with single risk factor were down-regulated than that from patients with multiple risk factors in CAD group (P=0.044, P=0.053).

**Conclusion** These findings shed new light onto the mechanisms of CAD, demonstrate that the expression of VDUP1 in FBCMs from treated patients with CAD has a negative correlation to CAD, and suggest that modulating the function of VDUP1 may open a new era of the therapy for CAD.

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**THE DIAGNOSIS OF CORONARY ARTERY ORIGIN ANOMALIES WITH DUAL-SOURCE CT AND ITS CLINICAL SIGNIFICANCE**

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**Purpose** To investigate the clinical value of dual-source computer tomography (DSCT) in detecting anomalous origin of coronary artery for adult patients.

**Materials and methods** A retrospective evaluation to identify 3903 patients who underwent DSCT coronary angiography from Jan 2009 to Jan 2010.

**Results** All images were considered to be suitable for evaluation. Forty-two of 3903 patients were detected to have coronary artery origin anomaly. The incidence is 1.08%. They include 26 cases with an anomalous origin of right coronary artery (0.67%), 13 cases with an anomalous origin of left coronary artery (0.33%), 3 cases with single coronary artery (0.08%).

**Conclusion** DSCT coronary angiography that provide accurate depiction of anomalous coronary origin and course along with the complex anatomical relation with the adjacent structures can be considered as a first-line imaging method for delineating coronary arterial anomalies.

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**RELATIONSHIP BETWEEN INSULIN RESISTANCE AND**

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**Objective** To determine insulin resistance in patients with coronary heart disease and explore the relationship between insulin resistance and coronary atherosclerosis, cardiovascular risk factors.

**Methods** The study population consisted of 506 consecutive patients (376 male and 130 female) who underwent coronary angiography and laboratory measurements for suspected or known coronary heart disease. The severity of coronary atherosclerosis was defined by using Gensini’s score system. The expression of VDUP1 in FBCMs from patients with CAD was down-regulated (p<0.05). Spearman’s correlation analysis and multivariate stepwise linear regression analysis were employed to explore the relationship between HOMA index and Gensini’s score, the cardiovascular risk factors.

**Result** One-way ANOVA and kruskal-wallis test indicated that age, triglyceride, apolipoprotein A, high density lipoprotein cholesterol, uric acid, BMI and Gensini’s score differed among four groups according to HOMA index (p<0.05). Spearman’s correlation analysis suggested that HOMA index was positively correlated with triglyceride, apolipoprotein B, uric acid, BMI and Gensini’s score but HOMA index was negatively correlated with apolipoprotein A and high density lipoprotein cholesterol. Multivariate stepwise linear regression analysis showed that BMI had the independent association with HOMA index (r=0.090, p=0.05).

**Conclusion** Insulin resistance existed in the patients with coronary heart disease. Insulin resistance was positively correlated with coronary atherosclerosis and was independently correlated with BMI in the patients with coronary heart disease.

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**HIGH SENSITIVITY C-REACTIVE PROTEIN AND THE RISK OF STENT THROMBOSIS AND CARDIOVASCULAR EVENTS**

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**Bin Hu, Yuje Zhou, Dongmei Shi, Yingxin Zhao. Beijing Anzhen Hospital**

**Objective** To examine the relationship between CRP and the risk of coronary artery disease (CAD) events and stent thrombosis in subjects undergone drug-eluting stent implantation.

**Background** C-reactive protein (CRP) is one of the acute phase proteins that increase during systemic inflammation. It’s been suggested that testing CRP levels in the blood may be an additional way to assess cardiovascular disease risk. A more sensitive CRP test, called a highly sensitive C-reactive protein (hs-CRP) assay, is available to determine heart disease risk. However, and the association between CRP and stent thrombosis after drug-eluting stent implantation has not been defined.

**Objective** To investigate in a follow-up study whether high-sensitivity C-reactive protein (hs-CRP) predicts coronary heart disease (CHD) events and stent thrombosis in subjects undergone drug-eluting stent implantation.

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**EFFECT OF TELMISARTAN ON CARDIAC FUNCTION AND BRAIN Natriuretic Peptide IN PATIENTS WITH CHRONIC HEART FAILURE**

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**Objective** To evaluate telmisartan on cardiac function and brain natriuretic peptide (BNP) patients with chronic heart failure (CHF).

**Methods** We enrolled 120 patients with CHF, NYHA-III, age 30–79 (61.25±10.18) years. All the patients were randomly assigned to 2 groups: standard therapy group (n=60, receiving ACEI, digoxin, diuretic, β-blocks), telmisartan treatment group (n=60 receiving telmisartan in addition to the standard therapy). These patients were treated for 1 years, and plasma levels of BNP and left ventricular ejection fraction (LVEF) were measured before and after treatments.

**Results** No significant differences in baseline characteristics were observed between the two groups. After treatment, BNP plasma levels both decreased and LVEF increased significantly in two groups. BNP plasma levels in telmisartan treatment group were lower than that in standard group and LVEF higher at 1 year follow-up.

**Conclusion** Telmisartan in addition to the standard therapy can improve the cardiac function and desease BNP plasma levels.