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CONTENTS

EXPERIMENTAL RESEARCH

1. Oxidized Low Density Lipoprotein and Stretch Stress Synergistically Promote the Activation of ERK1/2 in Macrophages. NING Fen, WANG Zhao-Jing, ZHANG Zheng-Yu, ZHANG Min, LIU Shu-Ying, LI Y u-Huang, HUANG Jin-Tao, and LI Chao-Hong. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 925

2. Selection of the Daxx Domain Interacting with Androgen Receptor. TUO Qin-Hui, XU Gui-Na, GUO Yan, ZHU Bing-Yang, and LIAO Duan-Fang. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 931

3. Angiotesin II Inhibit the Expression of Niemann Pick Protein C1 in THP-1 Macrophages and Decrease the Effluvent Rate of Cholesterol. LI Hui, YANG Zhi-Ming, XIAO Chuan-Shi, and KANG Yu-Ming. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 935

4. Establishment of Rats Model of Acute Myocardial Infarction. LI Ying-Dong, ZHAO Xin-Ke, LI Zi-Jia, CHEN Xue-Juan, and LIU Kai. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 939
5. Atorvastatin Inhibit the Apoptosis of Human Umbilical Vein Endothelial Cells Induced by High Glucose Through Regulating the Expression of Bcl2/Bax Protein. XIE Bin, LV Zhan, GOU Lian-Ping, CHEN Ling, LIANG Chuan-Liang, LIU Qian, and WU Shao-Hua. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 943

6. Resveratrol Prevents Alcoholic Cardiomyopathy Through Activating AMP Activated Protein Kinase. MA Shuang-Tao, YANG Da-Chun, LI De, TANG Bing, CHEN Jin-Song, and YANG Yong-Jian. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 948

7. Effect of Fluid Shear Stress on the Differentiation of Rat Bone Marrow Mesenchymal Stem Cells into Cardiomyocyte Like Cells Induced by 5 Azacytidine. XING Hong-Li, BIAN Yun-Fei, WU Wei-Dong, and XIAO Chuan-Shi. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 951

8. Protective Effect of Mangiferin on Kidney in Diabetic Rats. QIU Shui-Jing, LIU Yi, and DU Hong-Yu. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 956

9. Expression of p27Kip1 in the Atherosclerotic Plaques of Rats and the Influence of Fasudil. SUN Li-Qun, ZHAO Hui-Ying, GUO Gong-Liang, and PEI Li-Li. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 961

CLINICAL RESEARCH
10. Relationship Between Circadian Blood Pressure Variation and Arterial Stiffness Index.
LI Li-Hua, ZHOU Li, LI Meng, HE Yi-Ming, and GAO Yun-Guang. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 966

11. Relationship of Plasma α2 Heremans Schmid Glycoprotein Level with Lower Extremity Atherosclerosis in Patients with Type 2 Diabetes. TANG Hong, WANG Ling, BU Rui, WANG Dan, and YANG Qiu-Ping. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 969

12. Diagnosis of Color Doppler Ultrasound on the Lower Extremities Artery of Patients with Type2 Diabetes Mellitus(T2DM) and Hypertension. OUYANG Zheng-Ren, and MENG Li-Juan. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 972

13. Protective Efficacy of Atorvastatin Combined with Valsartan on Cardiovascular Patients with Coronary Borderline Lesions. ZHAO Ji-Hong, LI Yu-Ming, LI Xue-Wen, LIANG Guo-Qing, CHEN Shao-Bo, and LIANG Tie-Min. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 975

14. The Influence of Shensongyangxin Capsule on Heart Rate Variability in Patients with Essential Hypertension. LI Yong-Dong, LIU Dan, and DONG Chun-Hua. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 979
15. The Value of Preoperative Microalbuminuria Level for Predicting Myocardial Injury After Selective Coronary Intervention. WANG Hong-Mei, HU Yao-Hua, ZHAN Ruo-Hang, TIAN Li-Ming, HE Jun, and HU Yan-Qun. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 982

16. Association of Fibrinogen β 148C/T Gene Polymorphism with Cerebral Infarction and Plasma Fibrinogen Levels in Hunan Han Population. CHEN Ying, XU Hong-Wei, WANG Yi-Ning, LI Hua-Xiang, YANG Qi-Dong, and LIU Yun-Hai. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 985

17. The Study of Clinical and Coronary Angiographic Profile and the Relation Between C-Reactive Protein of Acute Myocardial Infarction Women Below. ZHAO Xin, HAN Ya-Ling, ZHANG Xin-Ya, XU Feng-Zhi, TONG Ming, YI Xian-Hua, and WANG Xiao-Zeng. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 989

18. A Study on Association of Fractalkine Receptor CX3CR1 Gene Polymorphism to Coronary Heart Disease. XIAO Hong-Kai, JIN Li-Zi, XIE Gui-Ting, CHEN Jian, CHEN Xiao-Chao, and XU Ming-Tong. CHINESE JOURNAL OF ARTERIOSCLEROSIS 2010; 22(22): 993

1. Oxidized Low Density Lipoprotein and Stretch Stress Synergistically Promote the
Activition of ERK1/2 in Macrophages

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[KEY WORDS] Macrophage; Stretch Stress; Oxidized Low Density Lipoprotein; ERK1/2; Atherosclerosis

[ABSTRACT] Aim: To explore effects of oxidized low density lipoprotein (ox-LDL) and mechanical stretch stress (SS) on activation of extracellular regulated kinase (ERK1/2) in macrophage RAW264.7 cells. Methods: The cultured RAW264.7 cells were identified via ink staining. Agarose gel electrophoresis was employed to identify and quantitate ox-LDL which was oxidized from n-LDL with copper sulfate. The identified RAW264.7 cells were subjected to treatment with ox-LDL and SS, respectively or jointly, for different dose/elongation and time duration, and then the phosphorylation of ERK1/2 in the macrophages was detected by Western blotting. Results: RAW264.7 cells could phagocytize ink, forming cloudy ink plaque or black particles in cytoplasm. N-LDL could be oxidized into ox-LDL by copper sulfate, since a single lane about ox-LDL could be seen in agarose gel electrophoresis, and the electrophoretic mobility of ox-LDL was higher than that of n-LDL, indicating successful ox-LDL preparation. Ox-LDL and SS could induce ERK1/2 phosphorylation, respectively, in a time and dose dependent manner, and dramatical increase of ERK1/2 phosphorylation was observed when the cells were
co-treated with SS and ox-LDL. Conclusions: Ox-LDL and SS could induce ERK1/2 phosphorylation, and combined treatment of ox-LDL and SS could synergistically promote ERK1/2 phosphorylation in macrophages. This study could provide useful information for exploring the roles of macrophages and its mechanism in hypertension related atherosclerosis.

2. Selection of the Daxx Domain Interacting with Androgen Receptor

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[KEY WORDS] Daxx; Androgen Receptor; GST Pull Down

[ABSTRACT] Aim: To select the functional domain of Daxx which can interact with androgen receptor (AR). Methods: Four functional domains of Daxx were amplified by polymerase chain reaction (PCR) and subcloned to a prokaryotic expression vector (pGEX 6p-1) respectively. The recombinant DNA fragments were identified by DNA sequencing. All recombinant vectors were stably transformed into E Coli. BL21 DE3 and induced by IPTG. Four recombinant peptides were detected to interact with AR by using GST pull down in vitro, respectively. Results: The results of pGEX 6p1/Daxx/DM1-240, pGEX-6p1/Daxx/DM241-501, pGEX-6p1/Daxx/DM502-625 and pGEX-6p1/Daxx/DM626-740 from DNA sequencing indicates that there is no reading frame shifts and mutations in recombinant. The protein expressed from pGEX-6p1/Daxx/DM626-740 can interact with AR by using GST pull down in vitro.
Conclusion: The 626th to 740th in amino acid of Daxx can combine AR.

3. Angiotesin II Inhibit the Expression of Niemann Pick Protein C1 in THP-1 Macrophages and Decrease the Effluent Rate of Cholesterol

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[KEY WORDS] Angiotesin II; Niemann Pick Protein C1; THP-1 Macrophages; Atherosclerosis

[ABSTRACT] Aim: To investigate the effect of angiotesin II (Ang II) on the expression of niemann pick protein C1 (NPC1) in THP-1 macrophages, and also explore the effect on the rate of cholesterol effluent. Methods: Macrophages were converted from THP-1 monocytes induced by phorbol 12 myristate 13 acetate (PMA) for 48 h, and then they were treated by Ang II at different concentrations. The expression of NPC1 mRNA and protein was determined by reverse transcription polymerase chain reaction (RT-PCR) and Western Blotting respectively. Cholesterol effluent was measured by liquid scintillator. Results: Compared with the control group, the expression of NPC1 mRNA and protein were significantly downregulated when incubated with Ang II dose dependently. Meanwhile, the effluent rate of cholesterol was also decreased. Conclusion: Angiotesin II may inhibit the expression of NPC1 in THP-1 macrophages and decrease the effluent rate of cholesterol, contributing to the development of atherosclerosis.
4. Establishment of Rats Model of Acute Myocardial Infarction

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[KEY WORDS] Myocardial Infarction; Ligation/Methods; Rat; Animal Disease Model

[ABSTRACT] Aim: To make animal model of acute myocardial infarction in rats. Methods: Rats were anesthetized by intraperitoneal injection of pentobarbital sodium solution, oral tracheal intubation under direct vision, the operating rats’ ribcage, the left anterior descending coronary artery (LAD) was ligated. After the surgery, rat’s respiratory tract was cleared. ECG, cardiac enzyme levels, pathological organization and measuring the infarct size were applied. Results: 6 of 40 rats died during the surgery, the success rate was 85%. Thirty minutes after operation, Wistar rates’ ECG showed the ST segment elevated and the pathological Q wave appeared; MB isoenzyme of creatine kinase (CK-MB), lactate dehydrogenase (LDH), LDH1 was compared in myocardial infarction group and sham operation group before ligation of LAD. CK-MB, LDH, LDH1 in myocardial infarction group increased significantly than those in sham operation group 24 h, 40 h after occlusion (P<0.05). LDH and LDH1 also increased significantly at 60 h (P<0.05). Observing the histological section under the light microscope, it was found that pathological cardiac muscle cells were arranged in disorder, and cell uncleus pyknosis and chip occurred; ischemic myocardium weight / left ventricle wet weight was also significantly greater in myocardial infarction group than sham operation group.
40 h, 60 h and 21 days after occlusion (P<0.01). Conclusion: This showed that the technique was easy to operate with small wound high success rate and credibility.

5. Atorvastatin Inhibit the Apoptosis of Human Umbilical Vein Endothelial Cells Induced by High Glucose Through Regulating the Expression of Bcl2/Bax Protein

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[KEY WORDS] Glucose; Endothelial Cell; Apoptosis; Atorvastatin

[ABSTRACT] Aim: To study the effects of atorvastatin on the apoptosis in human umbilical vein endothelial cells (HUVEC) induced by high glucose and to explore its potential molecular mechanism. Methods: The HUVEC were cultured in vitro. Apoptosis of HUVEC were observed by acridine orange/ethidium bromide fluorescence staining. The survival rates of HUVEC were detected by MTT assay after HUVEC were incubated with different glucose concentrations (5.6 mmol/L, 17.6 mmol/L, 33.3 mmol/L) and atorvastatin concentrations (0.1 μmol/L, 1 μmol/L, 10 μmol/L) for 24 hours. The early apoptosis rates and the Bcl2/Bax protein expression were respectively detected by flow cytometry and Western Blotting. Results: With the increase in glucose concentration, the values of MTT were significantly reduced (P<0.05). The early apoptosis rates of HUVEC were gradually increased with the increase in glucose
concentrations (P<0.05). The 33.3 mmol/L glucose group inhibited the expression of Bcl2 protein and increased the expression of Bax protein compared with the control group (P<0.05). 10 μmol/L atorvastatin decreased early apoptosis rates (P<0.01) and the expression of bax protein (P<0.05), increased the expression of Bcl2 protein (P<0.05) induced by 33.3 mmol/L glucose. Conclusion: Atorvastatin probably inhibit the apoptosis in HUVEC induced by high glucose through regulating the expression of Bcl2/Bax protein.

6. Resveratrol Prevents Alcoholic Cardiomyopathy Through Activating AMP Activated Protein Kinase

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[KEY WORDS] Resveratrol; Alcoholic Cardiomyopathy; AMP Activated Protein Kinase; Endothelial Nitric Oxide Synthase; Nitric Oxide

[ABSTRACT] Aim: To investigate the effect of resveratrol on alcoholic cardiomyopathy and the underlying molecular mechanisms. Methods: Male Wistar rats were divided into three groups: control, alcoholic, and alcoholic plus resveratrol group, n=10 for each group. After the intervention for six months, the invasive cardiac function of the rats was measured by physiological recorder, the histological structure of heart was evaluated by HE staining, the expression and phosphorylation of AMP activated protein kinase (AMPK) and endothelial nitric oxide synthase (eNOS) in myocardium were determined by
western blot, and the nitric oxide (NO) level in myocardium was detected by nitrate reductase method. Results: Alcoholic intake for six months caused a significant decline in cardiac function and an obvious damage in cardiac structure. Oral administration with resveratrol partially reversed alcoholic induced cardiac damage. Alcoholic intake significantly decreased the phosphorylated level of AMPK and eNOS and consequently decreased the NO level in myocardium. Treatment with resveratrol remarkably attenuated alcoholic induced decline in the phosphorylation of AMPK and eNOS and decrease in NO level. Conclusion: Resveratrol activates AMPK/eNOS pathway, increases NO level, and consequently prevents alcoholic cardiomyopathy.

7. Effect of Fluid Shear Stress on the Differentiation of Rat Bone Marrow Mesenchymal Stem Cells into Cardiomyocyte Like Cells Induced by 5 Azacytidine

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[KEY WORDS] Fluid Shear Stress; 5 Azacytidine; Bone Marrow Mesenchymal Stem Cells; Cardiomyocyte Like Cells

[ABSTRACT] Aim: To investigate the effect of 5 azacytidine on the differentiation of rat bone marrow mesenchymal stem cells (BMSC) into cardiomyocyte like cells, and explore the role of fluid shear stress. Methods: BMSC were isolated from rats marrow mononuclear cells by attaching growth. The 4th generation of BMSC were exposed to 3, 5, 10, 15 and 20 μmol/L 5 azacytidine for 12, 24 and 48 hours respectively. 10 μmol/L for 24 hours as best induction concentration was established based on α actin
expression of cardiomyocyte like cells after 3 weeks by immunofluorescence. The modles of BMSC were divided into four groups: no fluid shear stress group, load 5 dyn/cm² fluid shear stress group, load 15 dyn/cm² fluid shear stress group and load 25 dyn/cm² fluid shear stress group. After 24 hours, the morphology changes of BMSC was observed by inverted microscopy. RT-PCR was used to examine cTnl mRNA expression after 4 weeks later. Results: BMSC gradually became spindle with the passage. 5 Azacytidine induced BMSC increases cell bodies and extended long thin processes, branching occurs at the protruding end, some of the processes connecting adjacent cells to form a network, showed morphological transformation to the direction of the characteristics of myocardial cells. α actin was expressed by induction after 3 weeks. Through fluid shear stress mechanical stimulation, cTnl expression increased, positive bands was more significant than no fluid shear stress stimulation cells. It was the most obvious in 15 dyn/cm² fluid shear stress group. However, the change of 25 dyn/cm² fluid shear stress group was not increased at a positive correlation. Conclusions: 5 Azacytidine can induce the differentiation of BMSC into cardiomyocyte like cells. 5 Azacytidine combined with shear stress not only induce the differentiation of BMSC into cardiomyocyte like cells, but also cause cell differentiation, which seems to have a better effect than only 5 azacytidine.

8. Protective Effect of Mangiferin on Kidney in Diabetic Rats

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[KEY WORDS] Diabetic Nephropathy ; Mangiferin ; Transforming Growing Factor $\beta$ ; Matrix Metalloproteinases 2 ; Tissue Inhibitors of Matrix Metalloproteinase 2

[ABSTRACT] Aim: To investigate the therapeutic effects of mangiferin on experimental diabetic nephropathy in rats, and explore the underlying mechanism. Methods: The diabetic rats was induced by intraperitoneal injection with streptozotocin (STZ). The rats were randomly divided into five groups: the normal control group, the diabetic model group, the low (15 mg/ (kg * d) ), middle (30 mg/ (kg * d) ), high (60 mg/ (kg * d) ) doses of mangiferin therapy group. Renal weight, index number of kidney hypertrophy, fasting blood glucose and 24 hour urinary protein excretion were examined at 12 weeks. The structure of kidney was analyzed by light microscope. Immunohistochemistry and Western Blotting were used to detect the expression of transforming growing factor $\beta$ (TGF $\beta$ ), matrix metalloproteinases 2 (MMP-2), tissue inhibitors of matrix metalloproteinase 2 (TIMP-2) in renal tissues. Results: Compared with normal control group, the index number of kidney hypertrophy and 24 hour urinary protein were significantly up regulated in the diabetic group; the protein expression of TGF $\beta$ and TIMP 2 were significantly up regulated while MMP 2 was significantly decreased. Compared with the diabetic group, index number of kidney hypertrophy and 24 hour urinary protein were significantly decreased in mangiferin therapy groups (P<0.01); the protein expression of TGF $\beta$ and TIMP 2 were significantly decreased (P<0.05 or P<0.01), MMP-2 was significantly up regulated (P<0.05 or P<0.01).

Conclusion: The expression of TGF $\beta$, MMP-2 and TIMP-2 are related to diabetic
nephropathy (DN), mangiferin has protective effect on kidney of diabetic rats through affecting the changes of above mentioned indexes.

9. Expression of p27Kip1 in the Atherosclerotic Plaques of Rats and the Influence of Fasudil

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[KEY WORDS] p27Kip1; Atherosclerotic Plaque; Fasudil

[ABSTRACT] Aim: To investigate the expression of p27Kip1 in the atherosclerotic plaques of rats and fasudil hydrochloride intervention role. Methods: 30 healthy male Wistar rats were randomly divided into three groups: normal control group, atherosclerosis group and fasudil group. Rats in normal control group were undertook fake sacculus proprius damage and then were offered normal diet. Rats in atherosclerosis group and fasudil group were given Vitamin D3 intramuscular injection first, then were suffered artery balloon injury and were fed with basic diet added cholesterol, sodium cholate, propylthiouracil, Vitamin D3 powder, lard. While rats in fasudil group were given the intraperitoneal injection of fasudil. After 9 weeks, all the
rats were killed, the expression of Rho kinase and p27Kip1 protein in the vascular tissues were detected by immunohistochemistry method. Results: The atherosclerosis group formed typical atherosclerotic plaque. Semi quantitative immunohistochemical analysis showed that Rho kinase expressed in the normal vessel wall, and increased significantly in atherosclerosis group compared with that in the other two groups (P<0.01). Rho kinase expression in fasudil group also increased compared with that in normal control group (P<0.05). p27Kip1 protein expression in the normal vessel wall more, p27Kip1 protein expression in atherosclerosis group decreased significantly compared with that in the other two groups (P<0.01). p27Kip1 protein expression in fasudil group also decreased compared with that in the normal control group (P<0.05). Conclusion: The expression of Rho kinase obviously increased and the expression of p27Kip1 protein obviously reduced in atherosclerotic lesions. Fasudil obviously inhibit vascular smooth muscle cell proliferation, inhibit the up regulation of Rho kinase expression and down regulation of the p27Kip1 protein in atherosclerotic lesions.

10. Relationship Between Circadian Blood Pressure Variation and Arterial Stiffness

Index

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[KEY WORDS] Ambulatory Blood Pressure Monitoring; Circadian Rhythm; Arterial Stiffness
**[ABSTRACT]** Aim: To investigate the relationship between circadian rhythm of blood pressure and arterial stiffness. Methods: We collected and analyzed ambulatory and clinical data in inpatients of a comprehensive department during 2004-2008 in the Affiliated Hospital of Dali University. Results: In 242 inpatients, before and after adjustment of age, sex, antihypertensive treatment, 24 h pulse rate and mean arterial blood pressure, compared with dippers (n=85), non dippers (n=103), reverse dippers (n=42) and extreme dippers (n=12) had a significantly higher ambulatory arterial stiffness index and 24 h pulse pressure. There was no significant difference in age, plasma glucose, uric acid, total cholesterol and triglyceride among four groups (P>0.05). Conclusion: Abnormal circadian rhythm of blood pressure was associated with arterial stiffness.

11. **Relationship of Plasma α2 Heremans Schmid Glycoprotein Level with Lower Extremity Atherosclerosis in Patients with Type 2 Diabetes**

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**[KEY WORDS]** α2 Heremans Schmid Glycoprotein ; Type 2 Diabetes ; Lower Extremity Atherosclerosis

**[ABSTRACT]** Aim: To investigate the correlation and factors of plasma α2 heremans schmid glycoprotein (AHSG) level and lower extremity atherosclerosis (LEA) in patients with type 2 diabetes. Methods: Two hundred and forty five patients with type 2 diabetes
and eighty eight normal controls were enrolled. In these subjects, the plasma AHSG level were detected by enzyme linked immunosorbent assay (ELISA), and the degrement atherosclerosis of lower extremity was examined by Color Doppler Ultrasound, and TC, TG, HDL, LDL, Cr, BUN and fasting blood glucose (FBG) were measured. The differences were compared between the two groups. The effect factors of AHSG level by multiple stepwise regression analysis were defined. Results: The plasma levels of AHSG, SBP, DBP, BMI, BUN, Cr, FPG, TC, TG, HDL and LDL and scroces of LEA in the diabetic group were higher than those in the normal control group (P<0.01). After multiple stepwise regression analysis, there was a negative correlation between plasma AHSG level and age (P=0.011), but there was a positive correlation between LEA and age (P=0.001).

Conclusions: The plasma AHSG level in the diabetic group was higher than that in the normal control, maybe mainly due to insulin resistance. The plasma AHSG level had a positive correlation with LEA, but a negative correlation with age.

12. Diagnosis of Color Doppler Ultrasound on the Lower Extremities Artery of Patients with Type 2 Diabetes Mellitus (T2DM) and Hypertension

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[KEY WORDS] Color Doppler Ultrasound: Type 2 Diabetes Mellitus: Hypertension: Lower Extremities Artery

[ABSTRACT] Aim: We examined patients with type 2 diabetes mellitus (T2DM) and
hypertension using color Doppler ultrasound to observe the characteristics of atherosclerosis in lower artery. It would provide a theory for lower vascular disease prevention in patients with T2DM and hypertension. Methods: 70 T2DM patients were divided into two groups: 35 type 2 diabetes without hypertension and 35 type 2 diabetes with hypertension, 35 people in the control group received lower extremities vascular Doppler ultrasonography test. It included both lower extremities femoral artery, popliteal artery, posterior tibial artery and dorsalis pedis artery. The intimal media thickness (IMT) value, plaque size, resonance, distribution and haemodynamics index of every subjects were recorded. Results: Plaque of lower extremities in type 2 diabetes without hypertension and type 2 diabetes with hypertension were higher than the controls (P<0.05). The plaque incidence rate and IMT in group type 2 diabetes without hypertension were much lower than group type 2 diabetes with hypertension (P<0.05). Compared with the controls, the femoral artery, popliteal artery, arteria dorsalis pedis peak value flow rate cut down in the type 2 diabetes without hypertension and type 2 diabetes with hypertension group (P<0.05). Conclusion: It can detect the characteristics of atherosclerosis in lower artery in patients with type 2 diabetes mellitus (T2DM) and hypertension by color Doppler ultrasound. In the two dimensional images of the performance of the lower extremities artery IMT irregular thickening, plaque formation, particularly the main artery distal small; Color Doppler showed femoral artery, popliteal artery, dorsalis pedis artery peak velocity slowed down, pulsatility index (PI) raised.
13. Protective Effect of Atorvastatin Combined with Valsartan on Cardiovascular Patients with Coronary Borderline Lesions

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[KEY WORDS] Coronary Artery Plaque; Atorvastatin; Valsartan; Brain Natriuretic Peptide; High Sensitive C-Reaction Protein; 64 Row Multidetector Computed Tomography

[ABSTRACT] Aim: To investigate the combined therapeutic effects of statins (atorvastatin) and angiotensin receptor blocker (ARB, valsartan) for six months on patients with coronary borderline lesions confirmed by 64 row multi detector computed tomography (MDCT), with emphasis on systemic inflammatory response and imaging characteristics of coronary plaques. Methods: 116 patients with borderline coronary lesions detected by MDCT were enrolled and divided into two groups: single treatment group (56 patients) and combined treatment group (60 patients). In single treatment group, patients were received atorvastatin, and patients of combined treatment group were treated with atorvastatin and valsartan. Plasma high sensitive C-reaction protein (hsCRP) and brain natriuretic peptide (BNP) were examined before and after treatment in each group, and coronary artery lesions was rechecked by MDCT to evaluate the change of coronary artery plaques after six months of treatment. Results: Significant decreases were observed in plasma hsCRP and BNP after treatment in both groups (P<0.01), and patients in combined treatment group exhibited more significant
Left ventricular ejection fractions (LVEF) in all patients were significantly elevated (P<0.01), and patients of combined treatment group showed more significant improvement than single treatment group (P<0.05). In addition, MDCT showed a significant reduction of lipid plaque volume and only a slight reduction in both fibrous plaque volume and mixed plaque volume after treatment (P<0.05), and patients in combined treatment group exhibited more significant decreases than single treatment group (P<0.05). However, there was no significant change in calcified plaque of both groups. Incidence of adverse cardiovascular events in combined treatment group was significantly lower than single treatment group.

Conclusion: Combination of statins and ARB for six months can significantly inhibit systemic inflammatory response and stabilize coronary plaques.

14. The Influence of Shensongyangxin Capsule on Heart Rate Variability in Patients with Essential Hypertension

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[KEY WORDS] Shensongyangxin Capsule; Essential Hypertension; Heart Rate Variability

[ABSTRACT] Aim: To investigate the influence of Shensongyangxin capsule on heart rate variability (HRV) in patients with essential hypertension. Methods: 68 patients with essential hypertension were randomly divided into 2 groups. 32 patients with
conventional antihypertensive drug treatment (control group) and 36 patients with Shensongyangxin capsule 0.12 g, 3 times/d, 4 weeks based on the conventional antihypertensive drug (treatment group). The HRV and the time domain analysis indicator with Holter ECG were measured and analyzed before and 4 weeks after treatment. Results: Compared with control group, the standard deviation of normal to normal intervals (SDNN) (126.4 ± 26.1 ms vs 110.8 ± 17.9 ms), within 24 h each successive 5 min normal R R intervals average of standard deviation (SDANN) (108.4 ± 28.8 ms vs 98.2 ± 16.2 ms), rate mean square of the difference of successive R R interval (rMSSD) (28.7 ± 15.2 ms vs 26.4 ± 15.1 ms) and within 24 h nearby normal R R interphase sent a value greater than the count of 50 ms total R R interval percentage (PNN50%) (8.2% ± 7.1% vs 5.9% ± 5.3%) were significantly increased in treatment group (P < 0.05).

Conclusion: Shensongyangxin capsule can significantly improve the HRV and the prognosis in the patients with essential hypertension.

15. The Value of Preoperative Microalbuminuria Level for Predicting Myocardial Injury After Selective Coronary Intervention

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[KEY WORDS] Microalbuminuria; Percutaneous Coronary Intervention; Myocardial Injury

[ABSTRACT] Aim: To investigate the changes of microalbuminuria and to assess the
role of myocardial injury after percutaneous coronary intervention (PCI). Methods: 86 patients who underwent PCI were enrolled. Blood samples were respectively collected immediately before and after PCI at 24 hours, myocardial creatine kinase MB (CK-MB), cardiac troponin I (cTnI) and myoglobin (MB) were detected by Electrochemiluminescence, then the changes of myocardial injury markers were analyzed and compared between MAU positive group and negative group. Results: After 24 hours of operating, cTnI and CK-MB levels of MAU positive group were 1.68±0.74 μg/L and 10.16±4.18 μg/L respectively. cTnI and CK MB levels of MAU positive group were significantly higher than MAU negative group (P<0.05). MB levels of MAU positive group after 24 hours of operating were higher than preoperating (40.16±15.82 μg/L vs 16.68±6.45 μg/L), but there were no signifiant differences between MAU positive group and MAU negative group after 24 hours of operating. Conclusion: Postoperative cTnI, CK-MB and MB levels in the two groups were higher than preoperative levels, the differences had statistical significance, it suggested that PCI caused myocardial injury; postoperative cTnI and CK-MB levels of MAU positive group were significantly higher than MAU negative group. Preoperative MAU being positive had significantly predicted effect on myocardial injury after coronary intervention.

16.Association of Fibrinogen β 148C/T Gene Polymorphism with Cerebral Infarction and Plasma Fibrinogen Levels in Hunan Han Population

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[KEY WORDS] Fibrinogen; Gene Polymorphism; Cerebral Infarction

[ABSTRACT] Aim: To observe the association of fibrinogen β 148C/T gene polymorphism with plasma fibrinogen levels and cerebral infarction (CI) in Hunan Han population. Methods: 150 subjects with CI and 111 controls were enrolled in the study. The beta fibrinogen site C148T was genotyped by using restriction fragment length polymorphism method. The level of plasma fibrinogen was measured by the Clauss method. Results: The frequencies of T allele was 0.325 in CI group, and 0.200 in control group, frequency of T allele was significantly higher in CI group than that in control group (P=0.041). Furthermore, the results of Logistic regression analysis showed that the genotype of TT was an independent risk factor for CI (OR=2.040, 95%CI was 1.283~3.243, P=0.003). Plasma fibrinogen levels were higher in CI subtypes than those in control subtypes. In both CI group and control group, plasma fibrinogen levels in TT genotype were higher than those in CC and CT genotype. Conclusion: Fibrinogen β 148C/T polymorphism may be associated with susceptibility to CI in Hunan Han population. TT genotype increased risk to CI. Fibrinogen β 148C/T gene polymorphism may have association with plasma fibrinogen level. Carriers of TT genotype at fibrinogen β 148C/T gene polymorphism have higher levels of plasma fibrinogen.

17. The Study of Clinical and Coronary Angiographic Profile and the Relation Between C-Reactive Protein of Acute Myocardial Infarction Women Below 45

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[KEY WORDS] Acute Myocardial Infarction; Female Young; Coronary Angiographic Profile; C-Reactive Protein

[ABSTRACT] Aim: To perform a meta analysis of clinical and angiographic and CRP characteristics of women patients (age ≤ 45) with acute myocardial infarction (AMI) that investigated the correlation between female AMI, AMI risk factors and CRP of young women on the diagnosis of AMI predictive value. Methods: 31 female patients were enrolled which confirmed AMI by coronary angiography from January 2000 to June 2010. We collected their clinical data of AMI patients, coronary lesions, detection of CRP, lipids, fibrinogen, serum uric acid level and used logistic regression analysis to detect the relevance between risk factors and young women AMI. Results: Compared with the same age male AMI patients, the women patient’s AMI family history, hypertension, diabetes, cardiogenic shock, CRP levels were significantly higher and their coronary angiography showed multivessel disease disease based, LAD lesions associated with about 32.3% of AMI. The complete PCI revascularization rate and TIMI3 blood flow recovery of female patients were less than male which had the significant difference (P < 0.05). Two group’s 30 day hospital mortality (OR=1.23, 95%CI : 0.81 1.89) had no significant difference, but the young female patients hospital mortality (OR=1.15, 95%CI : 1.04 1.37) was higher and male patients with a higher one year mortality (OR=1.21, 95%CI : 1.07 1.47). The female patients who received the intervention hospital
mortality (OR=0.96, 95%CI : 0.74 1.26) and the 30 day mortality (OR=1.07, 95%CI : 0.90 1.29) had no significant difference, but one year mortality rate was higher (OR=1.13, 95%CI: 1.01 1.29). Conclusion: The women patients with AMI below 45 had higher proportion of hypertension, diabetes, AMI family history, cardiogenic shock, MVD,CRP,but the low rate of complete revascularization and higher one year mortality rate after PCI. Therefore it is necessary to do the best study of AMI treatment for female patients.

18. A Study on Association of Fractalkine Receptor CX3CR1 Gene Polymorphism to Coronary Heart Disease

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[KEY WORDS] Fractalkine; CX3CR1; Gene Polymorphism; Coronary Heart Disease

[ABSTRACT] Aim: To investigate the relationship between Fractalkine receptor CX3CR1 gene polymorphism and coronary heart disease (CHD). Methods: By polymerase chain reaction and restriction fragment length polymorphism (PCR-RFLP), CX3CR1 gene polymorphism was analyzed in 139 CHD patients and 90 control individuals, and the
distribution of CX3CR1 genotype was compared in CHD group and control group.

Results: The proportion of I249 allele was higher in control group than in CHD group (24.4% and 9.4%, P<0.05). There were no significant differences in 280T/M genotype frequencies and allele frequencies between CHD group and control group (P>0.05).

Conclusion: The I249 allele of the Fractalkine receptor CX3CR1 gene may be associated with a reduced risk of coronary heart disease, the CX3CR1 gene polymorphism is associated with CHD in Han nationality of South China.