P1
Efficacy and Safety of Low-dose Tirofiban in Aged Patients with ST-segment Elevation Acute Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention

L. Ren, W.G. Wang, Q. Wang, J. Zhang, X.Y. Tang, J.S. Feng, H.M. Yang, Q.S. Wang, the First Hospital of Qinhuangdao, Qinhuangdao 066000, China

BACKGROUND: Studies have shown that percutaneous coronary intervention combined with tirofiban therapy could improve the blood supply of heart and reduce cardiac infarction. This study aimed to study the efficacy and safety of low-dose tirofiban in the treatment of elderly patients with ST-segment elevation myocardial infarction (STEMI) who underwent primary percutaneous coronary intervention.

METHODS: From March 2009 to March 2013, a total of 172 elderly patients with STEMI treated with PCI were randomly divided into low-dose tirofiban (LD) group and standard-dose (SD) group and the control group. In SD group, tirofiban was administered intravenously with a bolus dose of 10 μg / kg within 3 minutes and followed by continuous intravenous infusion of 0.10-0.15 μg / (kg·min) for 48 h, compared with a bolus dose of 5 μg / kg and followed by continuous intravenous infusion of 0.05-0.075 μg / (kg·min) for 24 h in LD group. Control group also received preoperative medication with aspirin 300 mg, clopidogrel 300 mg, once daily. The thrombolysis in myocardial infarction (TIMI) grade flow, the myocardial blush grade (MBG) and the resolution of the sum of ST-segment elevation (sumSTR) 90 minutes after the operation were compared between the two groups. Left ventricular ejection fraction (LVEF) and left ventricular end diastolic dimension (LVEDD) and left ventricular end systolic dimension (LVESD) were also measured and compared. The incidence of the major adverse cardiovascular events (MACE) and bleeding complications and gastrointestinal adverse symptoms were compared.

RESULTS: The proportion of TIMI grade 2-3 and the myocardial blush grade 2-3 were higher in SD and LD group than that in control group, but there was no difference between SD and LD group. The resolution of the sum of ST-segment elevation (sumSTR) 90 minutes after the operation was higher in SD group and LD group than that in control group. There was no statistically significant difference in MACEs between three groups. The incidence of minor bleeding was significantly lower in LD group than that in SD group (6.78% vs. 21.05%, P<0.05). There was no difference between LD group and the control group in the incidence of bleeding.

CONCLUSIONS: Low-dose tirofiban is not inferior to standard dose in efficacy. What’s more, low-dose tirofiban shows a better safety characteristic of lower bleeding risk.

P2
Association of Non-enzymatic Glycosylation and Oxidative Stress with Angiosclerosis in Elderly Hypertensive Patients

Y. L.Yue, Y. Guo, J.H. Wang, M. Fang, Q. Di, Department of Geriatrics, the First Affiliated Hospital, Nanjing Medical University, Nanjing 210029, China

BACKGROUND: In the elderly patients with hypertension, the vascular compliance decreases and the vascular stiffness increases. This study aimed to evaluate associations of angiosclerosis with carboxymethyl (lysine)-adducts (CML), superoxide dismutase (SOD) and malondialdehyde (MDA) in the elderly patients with essential hypertension.
METHODS: Pulse wave velocity (PWV) was examined by auto-survey atherosclerosis apparatus, and serum levels of CML, SOD and MDA were measured by ELISA in 85 elderly hypertensive patients.

RESULTS: Univariate analysis indicated that PWV and age, CML and MDA were positively correlated (P<0.05), and MDA and CML was significantly positively correlated (r=0.797, P<0.01). But SOD and CML was significantly negatively correlated (r=-0.744, P<0.01), and multiple regression analysis showed that PWV and age, CML and MDA were positively correlated (P<0.05).

CONCLUSIONS: The degree of vascular sclerosis and non-enzymatic glycosylation, oxidative stress are positively correlated in the elderly patients with hypertension, and the level of non-enzymatic glycosylation is also positively correlated with oxidative stress.

P3
Clinical Observation of Mouse Nerve Growth Factor in Combination with Electric Temperature Needle for Treatment of Diabetic Peripheral Neuropathy

X.H. TANG1, Y.R. WANG, X.M. FANG, W.C. YE2. 1 Sichuan College of Traditional Chinese Medicine, Mianyang, 621000, China; 2 the Central Hospital of Mianyang City, Mianyang, 621000, China

BACKGROUND: Diabetic peripheral neuropathy (DPN) is the most common and complex complication of diabetes. There is no effective treatment for this condition. The present study aimed to evaluate efficacy of the mouse nerve growth factor (mNGF) in combination with electronic temperature needle for the treatment of DPN.

METHODS: Fifty patients (aged 62.0±5.5 years) with DPN were randomly divided into two groups (A and B). Group A received mNGF (30µg) by injection+electric temperature needle for 4 weeks and group B received mecobalamin only for 4 weeks. The clinical efficacy, the level of motor nerve conduction velocity (MNCV) and sensory nerve conduction velocity (SNCV), the Toronto clinical scoring system TCSS were measured before and after treatment.

RESULTS: The levels of MNCV and SNCV of group A (57.5±5.5 m/s vs. 43.5±5.0 m/s; 50.5±4.5 m/s vs. 37.5±3.5 m/s) and group B (50.0±3.0 m/s vs. 44.0±4.5 m/s; 43.0±5.0 m/s vs. 39.0±3.5 m/s) were improved significantly (P<.05). The nerve conduction velocity in group A was higher than that in group B (P<0.05), and the TCSS of group A and B was decreased after treatment (P<0.01), especially in group A (P<.05). The efficacy of group A was higher than that of group B (P<0.01). The levels of MNCV and SNCV of group A and B were improved significantly (P<0.05). The nerve conduction velocity in group A was higher than that in group B (P<0.05), and the TCSS of group A and B was decreased after treatment (P<0.01), especially in group A (P<0.05).CONCLUSIONS: Mouse nerve growth factor in combination with electric temperature needle is safe and effective in the treatment of DPN.

P4
Clinical Study of Renal Glucose Kang Mixture Combined with Western Medicine in the Treatment of Early Diabetic Nephropathy

X.Y. Gao1, Y. Liu1, L.P. Zhou1, J.J. Jiang1, Y. Chen1, Z.X. Shen1, S.Z. Sun2. 1Department of Nephrology; 2Department of Chinese Traditional Medicine, Jiangsu Provincial Geriatric Hospital, Nanjing 210024, China
**BACKGROUND:** Diabetic nephropathy (DN) is a common micro-vascular complication of diabetes. Early treatment could inhibit the development of DN. This study aimed to evaluate the clinical effect of renal glucose kang mixture combined with western drug on early diabetic nephropathy (DN).

**METHODS:** A total of 40 patients with early DN were randomly divided into treatment group (n=20) and control group (n=20). Two groups were given the diet and hypoglycemic therapy. Meanwhile they were given Fosinopril sodium tablets once a day, continuously for two months. The treatment group was given the oral renal glucose kang mixture with one agent a day and 300 ml each time, continuously for two months.

**RESULTS:** The outcome of treatment in the treatment group in reducing urinary microalbumin / creatinine and high sensitive C reactive protein was statistically better than that of control group (55.38±87.95mg/g vs. 88.80±112.90mg/g; 1.70±0.07mg/L vs. 1.39±2.00mg/L, P <.05).

**CONCLUSIONS:** Renal glucose kang mixture can improve the clinical symptoms of patients with early DN by reducing urinary microalbumin / creatinine and lowering high sensitivity C reactive protein that is related to clinical inflammation.

**P5**

**Protective Effects of Thrombopoietin on Cerebral Ischemia-reperfusion in Rats**

C.L. Zou, W.J. Chen, X.S. Sun, J. Fang, J. Tu, Y.Z. Zhao. *Department of Internal Medicine, the Second People's Hospital of Jingzhou, Jingzhou 434000, China*

**BACKGROUND:** Thrombopoietin is not only involved in hematopoiesis, but also has protective effects on nervous system. This study aimed to investigate the protective effects and the mechanism of thrombopoietin (TPO) on cerebral ischemia-reperfusion in rats.

**METHODS:** Thread embolism was performed to establish cerebral ischemia-reperfusion model in rats. Sixty SD rats were divided into TPO group, ischemia reperfusion group, sham operation group and normal group randomly. The TPO was given to TPO group at the beginning of ischemia at a dose of 5 μg / kg. Ischemia-reperfusion group was given isodose physiological saline. 6 h, 12 h, 24 h and 48 h after reperfusion, and the rats were executed and the brain tissues were cut into sections for HE staining and the immunohistochemical staining to detect Bcl-2 and apoptosis.

**RESULTS:** After ischemia-reperfusion, the apoptotic cells were detected in TPO group and ischemia-reperfusion group in lateral cortex of rats, and the apoptosis cell number of TPO group was obviously less than that of ischemia-reperfusion group (45.30±7.67 vs. 67.50±9.37, (P<0.05). While no apoptotic cells were detected in sham-operation group and normal group. The number of Bcl-2 positive cells in TPO group and ischemia-reperfusion group was higher than that in control group and normal group (68.36±9.20 and 50.40±8.39 vs. 13.40±3.76 and 12.40±2.26, P<.05) Expression of Bcl-2 protein in TPO group was significantly higher than that in ischemia-reperfusion group (P<0.05).

**CONCLUSIONS:** TPO can inhibit cell apoptosis of ischemia lateral cortex after ischemia-reperfusion injury, and the mechanism may be through raising the expression of Bcl-2 genes.

**P6**

**Influence of Different Anesthetic Methods on Serum High Sensitivity C-Reactive**
**Protein in Aged Hypertensive Patients Undergoing Joint Replacement for Lower Extremity**

L Jin, Z.L. Ma, X.P. Gu, J. Hao. *Department of Anesthesiology, Drum Tower Hospital Affiliated to Nanjing University Medical College, Nanjing 210008, China*

**OBJECTIVE:** This study aimed to investigate the influence of different anesthetic methods on serum high sensitivity C-reactive protein (hs-CRP) in aged hypertensive patients undergoing joint replacement for lower extremity.

**METHODS:** Thirty consecutive aged patients (ASA II-III) with hypertension undergoing scheduled total knee or hip replacement were enrolled in this study. The patients were randomly divided into general anesthesia group (group A) and subarachnoid block group (group B). The hemodynamics was monitored continuously during operation, and the serum level of hs-CRP was examined before anesthesia induction (T0), 5 min (T1) after anesthesia induction, 1 h (T2) after surgical incision, and at the end of operation (T3). One-way ANOVA analysis was used to investigate the difference in the level of hs-CRP between the time points.

**RESULTS:** (1) Compared to T0, the concentration of hs-CRP at different time points in both groups showed no statistical significance (group A: 2.837± 4.343, 2.585± 3.741, 2.938± 3.533 vs. 2.728± 4.650; group B: 2.809±2.340, 2.801± 2.235, 3.112±2.137 vs. 2.663±2.326). (2) The concentration of hs-CRP at T2 in group B was significantly higher than that in group A (2. 801±2. 235 vs. 2.585±3.741, P<.05).

**CONCLUSIONS:** Myocardial oxygen consumption could be decreased by general anesthesia or spinal anesthesia. There is no significant increase in the risk of cardiovascular disease in both groups.

**P7**

**Multi-focal Non-small-cell Lung Cancer in the Elderly Patients: Differential Diagnosis and Surgical Treatment**

Y.L. Zhang, Y.H. Sun, H.C. Li, J.Q. Xiang, Y.W. Zhang, H.Q. Chen. *Department of Thoracic Surgery, Shanghai Cancer Center Affiliated to Fudan University, Shanghai 200032, China*

**BACKGROUND:** It has been difficult to diagnose multi-focal non-small cell lung cancer (MFLC) from multiple primary lung cancer or intra-pulmonary metastasis. This study aimed to investigate the diagnostic and therapeutic methods for MFLC in the elderly patients.

**METHODS:** A prospectively recorded database of consecutive patients who underwent surgery for MFLC was reviewed. The elderly patients (≥65 years) who had been followed up over 6 months were included in this study. The diagnostic strategy previously reported to differentiate multiprimary lung cancers from intra-pulmonary metastasis was adopted. Survival curves were estimated by the Kaplan-Meier method and compared using the log-rank test.

**RESULTS:** Fifty-two elderly patients with MFLC underwent surgery in our center from January 2008 to May 2013, accounting for 20.4% of all MFLC patients. Among these patients, 11 were treated by lobectomy, 19 by lobectomy plus wedge resection, 11 by bilobectomy, 2 by segmentectomy plus wedge resection, and 9 by two wedge resections. No mortality and morbidity occurred in perioperative time. Pathologic outcomes were reported to reflect 50 cases of double adenocarcinomas and 2 cases of the combinations of adenocarcinoma and squamous cell carcinoma. Final diagnosis defined 32 cases as
multi-primary lung cancer and 20 as intra-pulmonary metastasis. The 2-year relapsed-free survival was 72.7% and 49.2%, respectively (P=0.012).

CONCLUSIONS: Elderly patients with MFLC are increasing in number. Differential diagnosis of multiple primaries or intra-pulmonary metastasis is significant. Depending on the diagnosis, these patients should be managed accordingly, and curative-intent resection may be beneficial to the former but not to the latter.

P8
Evaluation of the Effects of Exercise Combined with Nutrition Support on Chronic Obstructive Pulmonary Disease Complicated with Malnutrition

J. Huang, C.H. Li, Department of Respiratory, Affiliated Hospital of Jianghan University, Wuhan 430025, China

BACKGROUND: Malnutrition is one of the common complications of chronic obstructive pulmonary disease (COPD). This study aimed to evaluate the influences of exercise combined with nutrition support on COPD complicated with malnutrition.

METHODS: 228 cases of COPD were enrolled, and 80 cases (aged 69.28±9.42 years) complicated with malnutrition were selected. According to the treatment time, 80 cases were randomly divided into two groups. On the basis of routine therapy, the patients in treatment group were treated with exercise combined with nutrition support for 6 months, while the patients in control group were treated with routine therapy only. All the patients received FEV1%, 6 minutes walking distance (6MWD) and happiness satisfaction examination before and after the treatment.

RESULTS: There were no significant differences in age, sex, pulmonary function, 6MWD and happiness satisfaction between the two groups before intervention (P>0.05). After treatment, FEV1% and 6MWD of the treatment group were significantly improved 64.42±9.39% vs. 49.77±13.40%, P<0.05; 336.45±43.68m vs. 268.70±50.32m, P<0.05), but FEV1% and 6MWD of the control group showed no significant difference (59.59±6.93% vs. 46.61±10.54, P>0.05; 295.45±64.12 vs.280.85±65.36, P>0.05). 6MWD of the treatment group increased by 68 m and there was significant difference, compared with the control group (P<0.05). Happiness satisfaction scores of the treatment group were higher than that of the control group after treatment (34.98±6.39 vs. 23.93±5.27, P<0.05).

CONCLUSIONS: Exercise combined with nutrition support treatment could help to improve FEV1%, 6MWD and patients’ happiness, satisfaction scores in the patients with COPD complicated with malnutrition.

P9
Harmine Inhibits Migration and Invasion of Human Gastric Cancer Cells through down Regulating COX-2 Expression

K. Sun, X.L. Li, H. Zhang, K. Zhang, S.S. Pang, W.H. Sun. Department of Geriatric Gastroenterology, the First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, China
BACKGROUND: Studies have shown that harmine could effectively inhibit the invasion and migration of melanoma B16F-10 cells. This present study aimed to investigate the effects of harmine on the expression of cyclooxygenase-2 (COX-2), and the migration and invasion of a human gastric cancer cell line, MKN-45.

METHODS: MKN-45 cells were seeded in RPMI-1640 medium supplemented with 10% heat-inactivated fetal calf serum and routinely incubated for 24 h. After the treatment with harmine at a final concentration of 2, 4, 8, 16 and 32 μg/ml for 24, 48 and 72 h, the cell proliferation was determined using MTT colorimetric assay. The expression of COX-2 was detected by western blot analysis. In vitro wound-healing and transwell invasion assays were used to assess the effects of harmine on the migration and invasion of MKN-45 cells.

RESULTS: Harmine significantly suppressed the expression of COX-2 in a dose-dependent manner (4μg/ml: 662.57±110.41; 8μg/ml: 424.00±42.42; 16μg/ml: 271.83±41.38, P<0.01). Compared with control group, harmine significantly inhibited migration and invasion of MKN 45 cells (79.50±7.02, 47.75±8.95, 13.30±5.02 vs. 115.75±12.17, P<0.01).

CONCLUSIONS: This study demonstrates that harmine inhibits migration and invasion of human gastric cancer cells through down-regulating COX-2 expression.

P10
Effect of Testosterone on Kidney Structure and Function in Spontaneously Hypertensive Rats

D. Yi, S.J. Tan, J. Jin, Z. Zhang. Department of Geriatrics, Affiliated Sixth People’s Hospital, Shanghai Jiaotong University, Shanghai 200233, China

BACKGROUND: Recent studies have shown that sex hormones might influence the kidney structure and function through various mechanisms. This study aimed to investigate the effect of testosterone on kidney structure and function in spontaneously hypertensive rats (SHR).

METHODS: Eighteen SHR and Wistar Kyoto rats (WKY) of ten weeks old were ovariectomized and assigned to three groups randomly: ovariectomized (OVX) group, estrogen supplement after ovariectomy (OVX+EB) group and androgen supplement after ovariectomy (OVX+TP) group. They accepted intramuscular injection of tea oil 0.5 ml/(kg·2 d), estradiol benzoate(EB) 0.25 mg/(kg·2 d) and testosterone propionate(TP)3 mg/(kg·2 d) respectively for 8 weeks. The tail artery systolic blood pressure (SBP) was measured at the beginning, 4th and 8th week of the study respectively by tail cuff method. The rats were put into metabolic cages and the urine of 24 hours was collected, then the urinary albumin and urinary creatinine concentration were detected by ELISA, and the ratio of protein to creatinine was calculated. At last, all the rats were anesthetized and sacrificed, blood and tissue samples collected, and then the concentrations of serum testosterone, estradiol and progesterone were detected by ELISA. The right kidney weight was measured and pathological changes were observed.

RESULTS: Compared with SBP at the beginning of our study, SBP of OVX and OVX+TP of WKY or SHR increased continuously during 8 weeks experiment (WKY: 145.6±6.7 mmHg vs. 133.7±3.6 mmHg, 162.2±7.7 mmHg vs. 130.5±7.1 mmHg, P<0.05; SHR: 190.3±4.7 mmHg vs. 171.3±6.1 mmHg, 197.6±3.7 mmHg vs. 173.5±5.1 mmHg, P<.05). The changes in OVX+EB group were not significant (P>0.05). Compared with SBP of corresponding OVX group at 8th week, SBP of OVX+TP
group of WKY or SHR was significantly increased, while SBP in OVX+EB group was decreased (P<0.05). Meanwhile, TP intervention increased the single kidney weight (WKY: 0.942±0.107g vs. 0.638±0.064g, P<0.05; SHR: 0.829±0.174g vs. 0.621±0.047g, P<0.05) and the ratio of kidney to body weight (P<0.01) of both SHR and WKY. OVX and OVX+TP group of SHR or WKY showed glomerular and renal tubular injury. What’s more, the changes in OVX+TP group were more serious than those in OVX group, especially for SHR. Urinary albumin concentration and the ratio of protein to creatinine of OVX+TP group of SHR (16.56±3.30) was much higher than those in OVX group of SHR (5.37±0.85) and OVX+TP group of WKY (6.35±0.95, P<0.01). While TP supplement only increased urinary albumin concentration in WKY significantly (P<0.01), but had no effect on the ratio of protein to creatinine (P>0.05).

CONCLUSIONS: Physiological dose of testosterone can aggravate the changes of renal structure and function impairment of ovariectomized SHR and elevated blood pressure might be one of the possible mechanisms.

P11
Effects of External Counterpulsation on Motor Nerve Function in the Patients with Cerebral Infarction at Recovery Stage

Q. Qu, Y.Y. Yu, R. Yang, W.H. Chen, R.L. Wu. Department of Rehabilitation Medicine, Shanghai First People's Hospital, Shanghai 200800, China

BACKGROUND: External counterpulsation could increase the blood supply for brain and improve the brain circulation. This study aimed to investigate the clinical effects of external counterpulsation on motor nerve function in patients with cerebral infarction at recovery stage (in 3-10 months after initiation of stroke without fully recovery).

METHODS: Forty patients were randomly divided into group T (aged 62.89±2.37 years, receiving external counterpulsation) and group C (aged 65.10±2.21 years, receiving drug treatment) with 20 cases in each group. Motor evoked potentials (MEP) and activities of daily living (ADL) were evaluated before and after treatment.

RESULTS: There was no significant difference in stimulus threshold, latent period and amplitude between two groups at baseline (upper limb: 91.5±3.2 T% vs. 92.7±3.7T%, 27.8±2.3ms vs. 27.3±2.1ms, 550±0.12μv vs. 475±0.14μv; lower limb: 95.4±5.05 T% vs. 94.8±5.15 T%, 36.9±2.6 ms vs. 37.3±2.1 ms, 275±0.11μv vs. 300±0.13μv, P>.05). at baseline. Barthel index and motor nerve system function were obviously improved in group T compared with group C after intervention.

CONCLUSIONS: External counterpulsation may be favorable in improving motor nerve function in patients with cerebral infarction patients at a long period of time.

P12
Relationship between Glycated Hemoglobin and Carotid Intimal Medial Thickness in the Elderly Male Patients

D. Su1, X.P. Hou1, L. Chen1, W. Wei2. 1Graduate School of Anhui Medical University, Hefei 230032, China; 2Research Institute of Geriatrics, General Hospital of Air Force, Beijing 100142, China
BACKGROUND: In recent years, studies have shown that continuous decrease of the level of glycated hemoglobin (HbA1c) could reduce the incidence of the complications induced by diabetes. This study aimed to discuss the value of HbA1c in predicting carotid atherosclerosis in the elderly male population.

METHODS: Fifty elderly male patients with HbA1c≥6.0% (group A) and 48 elderly men with HbA1c<6.0% (group B) were enrolled, and the levels of fasting plasma glucose (FPG), 2 h post load plasma glucose (2hPG) and blood lipid were measured. Blood pressure in all the patients and CIMT were detected by ambulatory blood pressure monitoring and color Doppler apparatus respectively.

RESULTS: (1)The levels of FPG (6.07±1.21mmol/L vs. 5.06±0.76 mmol/L, P<.01), 2hPG (9.41±1.03 mmol/L vs. 7.15±0.41 mmol/L, P<.01), history of diabetes, triglyceride (1.51±0.67 mmol/L vs. 1.22±0.60 mmol/L, P<.05), 24 h systolic blood pressure (127.94±3.88 mmHg vs. 116.40±8.68 mmHg, P<.01), day systolic blood pressure (128.84±4.54 mmHg vs. 118.31±8.97 mmHg, P<.01) and night systolic blood pressure (127.52±4.27 mmHg vs. 114.08±8.51 mmHg, P<.01) were significantly higher in group A than those in group B (P<.05). (2) The level of CIMT in group B was (0.98±0.18) mm on the left and (0.92±0.18) mm on the right, and the prevalence of intimal thickening and the incidence of plaque were 62.5% and 37.5% respectively, compared with (1.22±0.18) mm on the left and (1.16±0.19) mm on the right, 94% on the prevalence of intimal thickening and 64% on the incidence of plaque in group A (P<0.01). (3) Regression analysis showed that HbA1c, smoking, 2hPG, 24 h systolic blood pressure and history of diabetes were strongly associated with CIMT in the elderly men.

CONCLUSIONS: The value of HbA1c is strongly associated with CIMT in the elderly men, which might have significant effects on carotid atherosclerosis.

P13
Changes of Blood Pressure Variability and Left Ventricular Mass Index in Hypertensive Patients Aged 80 and over

M.X. Gu, X.R. Yin, Q.Y. Xiao, C.N. Wang, Department of Cardiology, Nanjing Municipal Organ Hospital, Nanjing 210018, China

BACKGROUND: This present study aimed to investigate the changes of blood pressure variability and left ventricular mass index (LVMI) in hypertensive patients aged 80 and over.

METHODS: A total of 155 patients aged 80 and over were divided into three groups according to the level of blood pressure: normotensive (NH) group, hypertension (HT) group or treatment (TG) group. Ambulatory blood pressure monitoring and echocardiography detection were performed in all patients.

RESULTS: There was significant difference in LVMI between HT group and the other two groups (121.2±27.1 vs. 108.1±28.6 and 109.1±18.7, P<.05). Day systolic blood pressure variability (dSBPV, 13.6±3.6 vs. 11.9±2.8, P<.05), night diastolic blood pressure variability (nDBPV, 9.9±4.9 vs. 8.0±2.8, P<.05), 24 h systolic blood pressure variability (24hSBPV, 14.2±3.7 vs. 11.9±2.9, P<.05), 24 h diastolic blood pressure variability (24hDBPV, 10.8±2.8 vs. 9.3±2.7, P<.05), 24 h mean blood pressure variability (24hMBPV, 10.8±2.5 vs. 9.1±2.5, P<.05) and night mean blood pressure variability (nMBPV, 9.5±3.2 vs. 7.8±2.7, P<.05) in HT group were significantly higher than those in NH group. Night diastolic blood pressure variability (nDBPV, 9.2±3.5 vs. 8.0±2.8, P<.05). The 24hDBPV (9.5±2.7 vs. 9.3±2.7, P<.05) in TG group were significantly higher than those in NH group.
CONCLUSIONS: The level of blood pressure in hypertensive patients aged 80 and over plays an important role in left ventricular remodeling, blood pressure variability and cardiac hypertrophy.

P14
Observation of the Sedative and Oblivious Effects of Different Dosages of Midazolam on the Elderly Patients Receiving Epidural Anesthesia

C.X. Ding, D.M. Chen, L.L. Fan. Department of Anesthesiology, the Affiliated Hospital of Inner Mongolia Medical University, Hohhot 010050, China

BACKGROUND: The effect of spinal anesthesia is exact, but the awake state of the patients during surgery will cause long-term mental harm. This study aimed to observe the sedative and oblivious effects of different dosages of midazolam on the elderly patients receiving epidural anesthesia.

METHODS: One hundred and fifty elderly patients (aged 71±6 years) undergoing cholecystectomy operation under epidural anesthesia, ASA I - II were randomly divided into three groups: group A, group B and group C. They were given 0.02 mg/kg, 0.03 mg/kg or 0.04 mg/kg of midazolam through intravenous injection respectively. The consciousness state after the midazolam injection and the oblivious state 24 hours after the operation were observed and compared between three groups.

RESULTS: There were no statistical differences in heart rate, mean aortic pressure and SpO2 before and after anaesthesia among groups A (70±7 vs. 71±7; 91±8mmHg vs. 95±7 mmHg; 99.5±0.3% vs. 95.2±1.2%, P>.05), B (70±5 vs. 70±6; 91±5mmHg vs. 94±6mmHg; 99.6±0.3% vs. 95.6±1.1%, P>.05), and C (69±6 vs. 71±6; 90±8mmHg vs. 95±6 mmHg; 99.5±0.4% vs. 96.1±1.0%, P>.05). The sedative and oblivious effects of midazolam in group B and group C were better than those in group A, and 28% patients in group C suffered from severe respiratory depression.

CONCLUSIONS: 0.03 mg / kg of intravenous midazolam may be effective in epidural anesthesia for the elderly patients with low risk for severe respiratory depression.

P15
Serum Level and Clinical Significance of Growth Differentiation Factor-15 in the Elderly Patients with Acute Coronary Syndrome

L. Wang, W.W. Li, M.Wwi, Y.S. Liu, Q.S. Wang, L. Liu, Department of Cardiology, the First Hospital of Qinhuangdao City, Qinhuangdao 066000, China

BACKGROUND: Growth differentiation factor-15 (GDF-15) is not expressed in the normal cardiomyocytes, but under the stress such as ischemia or pressure overload, the expression of GDF-15 may be increased. This study aimed to investigate the changes and the short-term prognosis value of GDF-15 in the elderly patients with acute coronary syndrome (ACS).

METHODS: One hundred and sixteen patients (aged 70.5±7.8 years) with ACS including 46 cases of acute myocardial infarction (AMI) and 70 cases of unstable angina pectoris (UAP) were enrolled. And 40 cases with normal coronary angiography (CAG) were chosen as control group. The serum level of GDF-15 was determined by ELISA. In the meantime, all patients with ACS were followed up for six months and the adverse cardiovascular events (ACEs) were recorded.
RESULTS: The level of GDF-15 of AMI group was 815.41±227.54 ng/L, which was significantly higher than that of UAP group (735.06±144.94 ng/L, P<0.05) and control group (641.97±143.90 ng/L, P<0.01). The level of serum GDF-15 was of significant difference between UAP group and control group (P<0.01). GDF-15 level was significantly higher in the patients suffering from ACEs (P<0.01).

CONCLUSIONS: The GDF-15 level is obviously higher in the elderly patients with ACS and is dependent on the type of ACS. The serum level of GDF-15 is associated with short-term prognosis in the elderly patients with ACS.

P16
Analysis of Serum Homocysteine in the Elderly Patients with Chronic Obstructive Pulmonary Disease in Acute Exacerbation Period with Type 2 Diabetes Mellitus

J. Chen, J. Zhang, Department of Geriatrics, the First People’s Hospital of Changde, Changde 415000, China

BACKGROUND: Studies have shown that the serum level of homocysteine (Hcy) is increased in the patients with chronic obstructive pulmonary disease in acute exacerbation period (AECOPD) or type 2 diabetes mellitus (T2DM). This present study aimed to investigate the changes of serum Hcy in the elderly patients with AECOPD with T2DM and its clinical significance.

METHODS: An observational study enrolled 50 elderly patients with AECOPD complicated with T2DM (aged 72.0±7.5 years), 35 elderly patients with simple AECOPD (aged 71.6±8.0 years), and 30 healthy elderly served as control (70.6±7.1 years). Serum homocysteine levels were measured and compared among the three groups.

RESULTS: The expression of serum homocysteine (20.2±4.8μmol/L vs. 14.7±5.3μmol/L and 10.1±3.1μmol/L, P<.01) and the detection rate of hyperhomocysteinaemia (96.4% vs. 56.2% and 0, P<.01) in AECOPD complicated with T2DM group was significantly higher than that in simple AECOPD group and the healthy control group (P<0.01).

CONCLUSIONS: Elderly patients with AECOPD and T2DM had elevated serum homocysteine levels and higher prevalence of hyperhomocysteinaemia.

P17
Correlation between Testosterone Level and Carotid Artery Intima-media Thickness in Aged Male Hypertensive Patients

J.Q.Sheng, S.J. Tan. Department of Geriatrics, the Sixth People’s Hospital Affiliated to Shanghai Jiaotong University, Shanghai 200233, China

BACKGROUND: The decrease of testosterone level is reported to be associated with cardiovascular disease, obesity, and diabetes. This study aimed to investigate the association between plasma testosterone levels and carotid intima-media thickness (IMT) in the elderly hypertensive male patients.

METHODS: Ninety cases of elderly male patients (aged 75.33±14.24 years) with primary hypertension were enrolled, and they were divided into plaque group (n=56) and no plaque group (n=34) according to the presence of carotid atherosclerotic plaques. And another 80 healthy elderly
men were chosen as control group. The plasma level of testosterone (T) and carotid IMT of all the subjects were detected and the correlations between the parameters were analyzed. One-way ANOVA analysis was used to investigate the differences between three groups. Spearman analysis was used to analyze the correlation between the parameters.

RESULTS: The levels of SBP, DBP, IMT were the highest and the T level was the lowest in plague group (146.0±5.4 mmHg, 110.9±5.5 mmHg, 1.23±0.25mm and 12.53±3.88mmol/L) followed by no plaque group( 136.3±5.1 mmHg, 98.7±5.2 mmHg, 0.99±0.18mm and 13.46±4.67mmol/L) , control group (126.2±4.7 mmHg, 83.3±4.5 mmHg, 0.81±0.17mm and 15.25±4.84mmol/L). There were significant correlation of blood pressure and plasma T levels with IMT, and negative correlation of T level with systolic blood pressure (SBP), diastolic blood pressure (DBP) and IMT in the elderly male patients with hypertension (P<0.01).

CONCLUSIONS: Plasma T level is significantly associated with the severity of atherosclerosis in the elderly male patients with hypertension, which might provide a basis for hormone replacement therapy.

P18
Exosomes Derived from Lung Cancer Cells Treated by Cisplatin May Reduce the Sensitivity of Cancer Cells to Cisplatin

X. Xiao1, J. Z. Wu1, S.R. Yu1, J.F. Feng1, J.H. Miao2, S.C. Li3. 1Jiangsu Affiliated Cancer Hospital of Nanjing Medical University; Jiangsu Institute of Cancer Research, Nanjing 210009, China; 2Wuxi. NO 2 People's Hospital, Wuxi 214000, China; 3Nanjing University of Technology, Nanjing 210009, China

BACKGROUND: Exosomes is a micro-membrane vesicle. The genetic information carried by microRNA in the exosomes will cause the recipient cell's biological response. This study aimed to investigate whether the sensitivity of lung cancer cells to cisplatin could be influenced by exosomes derived from the cells.

METHODS: Exosomes were isolated from the supernatant of lung cancer cells with the method of ultracentrifugation and Exoquick-TC in combination. The morphology was observed with transmission electron microscopy, and the protein expression of CD63 was detected with western blot. The state of the cells treated with exosomes was observed with confocal microscopy. Exosomes were extracted from supernatant of lung cancer cells cultured in cisplatin condition or normal condition respectively, which were applied to the cells and the cell viability was detected with CCK-8.

RESULTS: Lung adenocarcinoma cell-derived exosomes showed discoid structure with a double membrane, and a diameter of 30,100 nm. Exosomes were enriched CD63 protein and were observed to enter cells under the microscope. The exosomes obtained under cisplatin condition reduced the sensitivity of cells to cisplatin (the survival rate of cancer cell increased by 24%).

CONCLUSIONS: Reducing secretion and transmission of exosomes might increase the efficacy of cisplatin, which provides a new idea about the treatment of lung cancer.

P19
A Survey on Epidemiological Distribution of Plasma Levels of Liver Function
Markers and its Influencing Factors in Rural Population

Y. C. Chen¹, S. Yang¹, X. H. Zhao¹, Q. L. Du¹, G. X. Cui¹, C. Shen², J. F. Chen², H. B. Shen², Y. M. Yang³ L. Wang³, K. Chen³, J. Hu³, X. L. Li⁴, ¹Department of Cardiology, People’s Hospital of Yixing City, Jiangsu University, Yixing 214200, China; ²Department of Epidemiology and Biostatistics, School of Public Health, Nanjing Medical University, Nanjing 210029, China; ³Yixing Center for Disease Prevention and Control, Yixing 214200, China; ⁴Department of Cardiology, First Affiliated Hospital of Nanjing Medical University, Nanjing 210029, China

BACKGROUND: This study aimed to investigate the epidemiological characteristics and the risk factors of plasma alanine aminotransferase (ALT), aspartate aminotransferase (AST) and gamma glutamyltransferase (GGT) in rural population.

METHODS: A cross-sectional study was conducted for the target population of 3,000 people aged 30 years and over in DuShan village in Yixing. A cluster sampling method was used and 2237 people underwent the measurement of height, weight, blood pressure, total cholesterol (TC), triglycerides (TG), low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), fasting blood glucose (FBG), uric acid (UA).

RESULTS: (1) 1673 people were included in the present study. The levels of ALT, AST and GGT in male were (22.2±14.5) U/L, (23.9±11.8) U/L and (36.9±78.7) U/L, compared with (20.0±18.9) U/L, (21.8±10.6) U/L and (23.6±24.0) U/L in female (t=2.638, P<0.01; t=3.719, P<0.01; t=4.579, P<0.01) respectively. (2) With the increase of age, the levels of ALT and GGT were significantly decreased in male. (3) There was significant difference of abnormal proportion of ALT and GGT (≥40 U/L) between male and female whereas no difference was found in AST. Abnormal proportion of ALT and GGT significantly decreased with the increase of age (χ²=15.700, P<0.01; χ²=25.069, P<0.01), and 60~70 years group showed the highest abnormal GGT proportion (χ²=10.790, P=0.013). (4) Univariate analysis indicated that the increase of the aminotransferases was significantly associated with TC, TG, UA, BMI, gender and age. (5) Multiple Logistic regressions showed that age, BMI, TG and UA were significantly associated with elevated ALT, TC and UA significantly associated with elevated AST, and age, gender, BMI, TC, TG, LDL-C, UA, Cr, FBG and drinking significantly associated with elevated GGT.

CONCLUSIONS: ALT and GGT in men significantly decrease with the increase of age. BMI, lipids, FBG, UA and drinking might affect aminotransferase elevation in rural population.

P20

Correlation between Deep Perforating Infarction Pattern of Middle Cerebral Artery and Progressive Motor Deficits after Acute Cerebral Infarction

S. G. Cao, W. A. Xu, J. He, H. Zhao, R. F. Wang, M. W. Xia, Department of Neurology, the Affiliated Hefei Hospital of Anhui Medical University, Hefei, China

BACKGROUND: Persistent motor deficit is the main reason for severe disability in patients with acute cerebral infarction, whereas neuroimaging characteristics may be useful for predicting the occurrence of progressive motor deficits (PMD) after acute cerebral infarction. This study aimed to identify the correlation between deep perforating infarction pattern of middle cerebral artery and PMD.
after acute cerebral infarction.

**METHODS:** A total of 154 patients with acute deep perforating infarction of middle cerebral artery hospitalized from June 2011 to June 2013 were enrolled prospectively (mean age 63.8±10.8 years, 59.1% female). They were divided into either a PMD group or a stable group based on patient condition and the change of motor National Institutes of Health Stroke Scale (mNIHSS) scores. According to diffusion-weighted imaging, lesion patterns were classified as internal border-zone (IBZ) infarct and perforating artery infarct (PAI). The latter was divided into large PAI (≥20mm) and small PAI (<20mm) upon the diameter. The general clinical, laboratory data and lesion pattern were compared between the two groups. The single factor and logistic regression analysis were used to analyze the correlation between lesion pattern and PMD after acute cerebral infarction in deep perforating artery of middle cerebral artery.

**RESULTS:** Based on patient condition and the change of mNIHSS scores, 44 patients (28.6%) were in PMD group, the remaining 110 patients were in stable group. The IBZ infarct and large PAI in PMD group were significantly higher than those in the stable group (25.0% vs. 10.0% and 38.6% vs. 20.9% respectively, p<0.01). However, small PAI in PMD group was significantly lower than that in the stable group (36.4% vs. 69.1%, p<0.01). Logistic regression analysis identified that IBZ infarct (OR=4.622, 95% CI: 1.697–12.593, p=0.003) and large PAI (OR=3.283, 95% CI: 1.424–7.566, p=0.005) were independent predictors for PMD.

**CONCLUSIONS:** Deep perforating infarction pattern of middle cerebral artery is closely associated with PMD after acute cerebral infarction. IBZ infarct and large PAI are important predictors for PMD.

**P21**

**Relationship between Sex and Symptomatic Intracranial Atherosclerotic Stenosis**

Y.M. Cao¹, X. Zhang¹*, P.X. Chen², L. Long¹, X. Wan³, S. Wang¹, C.B. Dai¹, G.X. Ma¹, L.J. Wang¹

¹Department of Neurology, Guangdong Provincial People’s Hospital, Guangdong Academy of Medical Sciences, Guangzhou 510080, Guangdong Province, China; ²Department of Endocrinology, the Second Affiliated Hospital of Shantou University Medical College, Shantou, 515000, China; ³Department of Neurology, Guangzhou Red Cross Hospital, Guangzhou 510250, Guangdong Province, China

**BACKGROUND:** Ischemic stroke is one of the most common causes of death and the disability in Chinese populations. Cerebral artery atherosclerotic stenosis is an important cause of cerebral infarction and leads to about 20–40% of all ischemic strokes. The morbidity of intracranial atherosclerotic stenosis is substantially higher in Asian countries, particularly in China, than that in western countries. It is of great significance to prevent and treat the risk factors of intracranial artery atherosclerotic stenosis. There are particular risk factors of intracranial atherosclerotic stenosis. Different ages may be associated with different sites of cerebral artery atherosclerotic stenosis. Males might be correlated with high risk of the incidence of ischemic stroke, but the relationship between sex and symptomatic intracranial atherosclerotic stenosis is still controversial.

**OBJECTIVE:** To provide the evidence for the risk factors of symptomatic intracranial artery atherosclerotic stenosis, and the prevention and control of ischemic cerebrovascular disease by studying the relationship between sex and symptomatic intracranial atherosclerotic stenosis.

**METHODS:** Relationship of symptomatic intracranial atherosclerotic stenosis with sex and age was retrospectively analyzed in 3708 patients with cerebral digital subtraction
angiography(DSA)-confirmed ischemic cerebrovascular diseases. They were separated into control group(1476 patients without significant intracranial or extracranial artery atherosclerotic stenosis) and cerebral artery atherosclerotic stenosis(CAAS) group(n=2232) according to the standard that the rate of cerebral artery atherosclerotic stenosis was greater than 50%. The CAAS group was divided into intracranial artery atherosclerotic stenosis(ICAS) group(n=1078), extracranial artery atherosclerotic stenosis(ECAS) group(n=563) and extracranial-intracerebral artery atherosclerotic stenosis(IECAS) group(n=591) by the the site of the cerebral artery atherosclerotic stenosis. The CAAS group was also divided into 4 subgroups by age, including ≤40 years old group(n=46), 65-79 years old group(n=1008), 65-79 years old group(n=1062), and ≥80 years old group(n=116). The ICAS group was divided into another 3 subgroups according to the site of cerebral artery atherosclerotic stenosis in anterior or posterior.

RESULTS: The incidence of simple intracranial artery atherosclerosis stenosis was significantly higher than that of simple extracranial artery atherosclerosis stenosis and extracranial-intracerebral artery atherosclerosis stenosis in patients with symptomatic intracranial or extracranial artery stenosis(48.3% vs 25.2% vs 26.5%, P<.01). There were more males than females in intracranial artery stenosis group, extracranial artery atherosclerosis stenosis group and extracranial-intracerebral artery atherosclerosis stenosis(68.8% vs 31.2%, P<.01). Furtherly, multiple logistic regression analysis showed that the incidence of simple intracranial artery stenosis was 1.93 higher in males than in females(OR=1.93, 95%CI:1.533-2.436, P<.001)). There was no significant difference between sex and cerebral artery distributed in anterior or posterior, and the logistic regression analysis showed the same result. The incidence of simple intracranial artery atherosclerotic stenosis was significantly lower, whereas the incidence of simple extracranial artery atherosclerotic stenosis and extracranial-intracerebral artery atherosclerotic stenosis was significantly higher in 41-64, 65-79 and ≥80 year old old patients than in ≤40 year old patients, and higher in 65-79 and ≥80 year old patients than in 41-64 year old patients(P<.01). The incidence of intracranial anterior artery atherosclerotic stenosis was significantly higher in 65-79 year old patients than in 41-64 year old patients(P<.01). The incidence of intracranial posterior artery atherosclerotic stenosis and intracranial anterior-posterior artery atherosclerotic stenosis was significantly lower in 65-79 year old patients than in 41-64 year old patients (P<.01).

CONCLUSIONS: Sex is related with symptomatic intracranial artery stenosis in Chinese Han population. Its incidence is higher in males than in females and its distribution is characterized by age.

P22

Relationship between Extracranial Atherosclerotic Stenosis and Periventricular Leukoaraiosis

Z. W. Duan, H. Li, W. Sun, Q. K. Cai, L. L. Xiao, X. F. Liu. Department of Neurology, Nanjing General Hospital of Nanjing Military Command, PLA, Southern Medical University, Nanjing, China

OBJECTIVE: To explore whether the senile leukoaraiosis (LA) in periventricular and centrum semiovale regions correlates with intracranial atherosclerotic stenosis (ICAS) and extracranial atherosclerotic stenosis (ECAS).

METHODS: 333 consecutive patients with acute ischemic stroke or transient ischemic attack were enrolled from the Jinling Hospital and divided into non/mild-LA group with Fazekas level 0 and level 1 and moderate/severe-LA group with Fazekas level 2 and level 3 in periventricular and centrum semiovale, respectively. All patients included underwent both cerebrocervical catheter-based
angiography and brain MRI during hospital stay. For the periventricular group, 206 patients had non/mild-LA and 127 patients had moderate/severe-LA, and for the centrum semiovale group, 270 had non/mild-LA and 63 patients had moderate/severe-LA. The status of cerebrocervical artery was evaluated and the relationship between ICAS/ECAS and LA in different regions was analyzed.

RESULTS: Univariate analysis of the basic data showed that age (70.14±4.31 vs 71.97±4.45, \(P<0.001\)), hypertension (\(P=0.001\)), history of stroke (\(P=0.041\)), ECAS (\(P=0.003\)) and anterior circulation stenosis (\(P=0.020\)) were significantly associated with moderate/severe-LA in periventricular, while age (70.57±4.41 vs 71.97±4.45, \(P=0.025\)), hypertension (\(P=0.003\)), history of stroke (\(P<0.001\)), diabetes mellitus (\(P=0.026\)), ECAS (\(P=0.006\)) and anterior circulation stenosis (\(P=0.019\)) were significantly associated with moderate/severe-LA in centrum semiovale. After adjustment for the confounding factors, ECAS was an independent risk factor of LA in periventricular (OR=1.653, 95%CI=1.017-2.686, \(P=0.042\)) rather than an independent risk factor of LA in centrum semiovale (OR=1.594, 95%CI=0.882-2.879, \(P=0.123\)).

CONCLUSION: ECAS was independently associated with the presence of LA in periventricular regions.

P23
Correlation between Severity Scores of Chronic Anxiety and Depression Disorders and Those of Ischemic Cerebrovascular Disease

Z. Y. Gao, W. B. Wang. Department of Neurology of Zichuan People’s Hospital, Zichuan District, Zibo City, Shandong Province, China.

OBJECTIVE: This study aimed to explore the correlation between chronic anxiety and depression disorders and ischemic cerebrovascular diseases (ICVD). The ICVD includes cerebral infarction, ischemic leukoencephalopathy and cerebral atherosclerosis.

METHODS: According to the diagnostic criteria of chronic anxiety and depression disorders in DSM-IV, all the patients who were admitted in our hospital’s neurology department during the time between December 2012 and April 2013 were given scores based on the severity of chronic anxiety disorders and chronic depression disorders by an experienced psychiatric clinician. Then, one neurologist was required to give a score on the severity of ICVD in the aspects of cerebral infarction, ischemic leukoencephalopathy and cerebral atherosclerosis respectively for all the patients according to the brain CT, MRI and MRA scan that the patients did in our hospital after admission. Last, the correlation between the severity scores of chronic anxiety disorders and depression disorders and the severity scores of ICVD were analyzed respectively.

RESULTS: The results showed that the number of the cases and the average scores for each item were as follows: chronic anxiety (220, 0.96±1.17), depression (220, 0.85±1.14), cerebral infarction (219, 1.16±1.12), ischemic leukoencephalopathy (220, 1.02±1.18) and cerebral atherosclerosis (85, 1.53±1.10). The results show that there's a significant negative correlation between the severity scores of chronic anxiety disorders and the severity scores of cerebral infarction, ischemic leukoencephalopathy and cerebral atherosclerosis respectively (r=-0.335, \(P <0.01\); r=-0.213, \(P <0.01\); r=-0.246, \(P <0.05\)). Compared with the patients without chronic anxiety disorders, the patients with chronic anxiety disorders have lower severity scores in aspects of cerebral infarction, ischemic leukoencephalopathy and cerebral atherosclerosis (1.48±1.185 vs 0.83±0.937, \(P <0.01\); 1.32±1.27 vs 0.71±1.000, \(P <0.01\); 1.80±1.123 vs 1.27±1.020, \(P <0.05\)). The results also show that there is no
correlation between the severity scores of chronic depression disorders and the severity scores of cerebral infarction, ischemic leukoencephalopathy and cerebral atherosclerosis respectively ($r=-0.024, P>0.05; r=0.040, P>0.05; r=0.027, P>0.05$).

CONCLUSION: Inverse correlation was identified in severity scores between chronic anxiety disorders and ICVD. Further research is needed to investigate potential causal relationship.

P24
Correlation of Atherosclerotic Disease between Extracranial and Intracranial Carotid Artery in Symptomatic Patients: A 3.0T MR Vessel Wall Imaging Study

X. Han,1 X.H. Zhao,2 D.Q. Liu,1 B. Cui,1 L. Ma,1 Y.Q. Cai,1 J.M. Cai1. 1Department of Radiology, PLA General Hospital, Beijing, China; 2Center for Biomedical Imaging Research, Tsinghua University, Beijing, China.

BACKGROUND: Atherosclerosis (AS) is associated with cerebrovascular events. It is well-established that AS is a systematic disease involving multiple vascular beds simultaneously. Previous studies have shown that the coexisting AS at intracranial and extracranial vascular territories is common in patients with stroke. However, the correlation of AS between intracranial and extracranial arteries has not been well studied. The purpose of this research was to investigate the correlation of atherosclerotic disease between extracranial and intracranial carotid arteries in symptomatic patients.

METHODS: 55 patients with recent ischemic stroke or transient ischemic attack (TIA) (< one month) were recruited in this study. Each patient underwent extracranial carotid BB vessel wall MR imaging and intracranial MR angiography within one week. The MR examinations were performed at a 3.0T whole body scanner (Signa Excite HD 3.0T, General Electric Medical Systems) with a 4-channel phase-array carotid coil and 8-channel head coil, respectively. The MR images of intracranial arteries were acquired using three dimensional (3D) time of flight (TOF) sequence. The vessel wall of bilateral carotid arteries was imaged by high-resolution, multicontrast imaging protocol including BB T1 weighted, BB proton density weighted, BB T2 weighted, and 3D TOF imaging sequences.

RESULTS: Of 55 recruited patients, 27 had stroke (49.1%) and 28 had TIA (50.9%). For extracranial carotid artery, the maximum wall thickness (MaxWT), length of the plaque and luminal stenosis was 3.7±1.6mm, 27.7±15mm, and 37.9±30.6%, respectively. Of 55 patients, 37 (67.3%) had calcification, 24 (43.6%) had intraplaque hemorrhage (IPH), 25 (45.5%) had lipid-rich necrotic core (LRNC), and 13 (23.6%) had fibrous cap rupture (FCR) at extracranial carotid lesions. For intracranial artery disease, the luminal stenosis was 37.2±26.5% for middle cerebral artery (MCA) and 37.5±26.2% for anterior circulation arteries, respectively. The MCA stenosis was significantly correlated with carotid MaxWT ($r=0.866, P<0.01$) and luminal stenosis ($r=0.564, P<0.001$). Similarly, stenosis of anterior circulation arteries was significantly associated with carotid MaxWT ($r=0.879 P<0.01$) and luminal stenosis ($r=0.598, P<0.001$).

CONCLUSION: There was significant correlation for severity of atherosclerotic disease between intracranial and extracranial circulations. Atherosclerotic plaque at extracranial carotid artery might be an indicator for either presence or severity of intracranial atherosclerotic disease.

P25
Eddy Strength Index Assessment of Left Ventricular Function in Healthy Volunteers
and Patients with Chronic Heart Failure

Y.Jin, M.Chen, W.D.Chen, J.H.Zheng, Y.Gao, M.Xu, Department of Radiology, Longnan Hospital of Daqing, Daqing, China

BACKGROUND: Conventionally, it is demonstrated that the left ventricular (LV) chamber contracts and dilates for ejection and filling, few studies have focused on the filling phase of diastole. The aim of this study was to investigate the influence of vortex blood flow on the left ventricular function in patients with chronic heart failure by color Doppler-based vector flow mapping (VFM).

METHODS: Healthy volunteers (n=20) and patients with chronic heart failure (n=57) were recruited on the basis of established criteria for analyses of vortex blood flow eddy strength (ES) and the left ventricular ejection fraction (EF).

RESULTS: ES was significantly correlated to EF ($r = 0.712, P < 0.001$), but there was no significant correlation between ES and other variables, such as heart rate, systolic and diastolic blood pressure, end-diastolic volume and end-systolic volume. LVEDD, LVEDS, LVEDV, LVESV were significantly lower than the control group ($P < 0.01$). Maximum flow volume, $1/2$ flow area and ES were still significantly lower than the control group ($P < 0.05, P < 0.01$).

<table>
<thead>
<tr>
<th>Item</th>
<th>Control group (n=20)</th>
<th>Chronic heart failure (n=57)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LVEDD(mm)</td>
<td>46.9±3.5</td>
<td>61.7±8.9</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>LVEDS(mm)</td>
<td>29.3±2.7</td>
<td>49.4±9.4</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>LVEDV(ml)</td>
<td>104.8±19.1</td>
<td>143.9±19.1</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>LVESV(ml)</td>
<td>34.9±7.8</td>
<td>99.5±30.8</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>SV(ml)</td>
<td>70.1±12.3</td>
<td>54.9±10.2</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>CO(L/min)</td>
<td>5.0±1.1</td>
<td>4.4±1.1</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>CI[L/(min.m2)]</td>
<td>2.9±0.6</td>
<td>2.5±0.6</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>LVEF(%)</td>
<td>67.0±3.0</td>
<td>39.2±6.4</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>FS(%)</td>
<td>37.6±2.9</td>
<td>20.3±5.1</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>IRT(ms)</td>
<td>73.7±4.8</td>
<td>121.4±31.9</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>ICT(ms)</td>
<td>35.8±7.8</td>
<td>77.1±18.2</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>LVET(ms)</td>
<td>322.3±13.9</td>
<td>231.4±32.3</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Tei index</td>
<td>0.3±0.02</td>
<td>0.9±0.1</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Maximum flow volume (cm$^3$/s)</td>
<td>35.5±11.6</td>
<td>30.7±7.2</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>$1/2$ flow area (cm$^2$)</td>
<td>2.9 ± 1.7</td>
<td>2.5 ± 1.1</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>ES (/s)</td>
<td>56.5 ± 21.5</td>
<td>27.3 ± 14.5</td>
<td>&lt; .01</td>
</tr>
</tbody>
</table>

CONCLUSIONS: These observations suggested that the intensity of vortex blood flow influenced the left ventricular function, establishing a vortex flow-based parameter for evaluating the contractile function of the left ventricle.

P26
P2X7 Receptor Participation in the Activation of NLRP3 Inflammasome in Trigeminal Ganglia of Dural Inflammatory Stimuli Rats
BACKGROUND: Migraine is a common neurovascular disorder in the clinical and its pathogenesis is very complicated. This study aimed to investigate whether NLRP3 inflammasome is activated in a rat model of dura inflammatory stimuli which can simulate the migraine attack, and to explore whether P2X7 receptor (P2X7R) is involved in NLRP3 activation.

METHODS: There are 42 male SD rats, 27 of which were used for immunoblotting experiments. They were randomly divided into 9 groups (each group n=3): blank group, inflammatory soup 3h group, inflammatory soup 6h group, inflammatory soup 1d group, inflammatory soup 2d group, inflammatory soup 3d group, saline group, inflammatory soup 2d control group, and brilliant Blue G (BBG) treatment group. 15 rats were used for immunofluorescence experiments. They were randomly divided into 3 groups (each group n=5): blank group, saline group, inflammatory soup 2d group. Using the inflammatory agent to stimulate rat dura, observe the P2X7R and NLRP3 expression in trigeminal ganglion of satellite glial cells and neurons in each rat group by immunofluorescence double staining and immunoblotting techniques. After treatment of P2X7 receptor antagonist Brilliant Blue G (BBG), observe the P2X7R and NLRP3 expression in each group of rats.

RESULTS: ① Immunofluorescence double staining: NLRP3 was found to be located in trigeminal neurons. The P2X7R was expressed mainly in the satellite glial cell surface and intracellular. And compared with the control group and the saline group, NLRP3 and P2X7R expression levels of inflammatory agents were significantly higher. ② Immunoblotting: compared with the control group, NLRP3 and P2X7R protein expression in each group of inflammatory agents were significantly increased. The difference was statistically significant (P ≤ 0.05). After BBG treatment, P2X7R and NLRP3 can be successfully inhibited. Each protein expression in inflammatory agents was lower than that of control group and saline control group. The difference was statistically significant (P ≤ 0.05).

CONCLUSION: In a rat model of dura inflammatory stimuli, activation of P2X7R and NLRP3 can be observed. In addition, P2X7R inhibitor BBG can significantly inhibit NLRP3 inflammasome. This shows that P2X7R participates in the activation of NLRP3.

P27
Evaluation of Cerebrovascular Reactivity in the Posterior Circulation Infarction Patients without Carotid and Cerebrovascular Stenosis

Z.L. Li1, F. Yang1, L. Kong1, W.Y. Lan1, W. Bai1, J.Z. Hu1, Z.X. Huang2, L. Liu1, R.L. Zhang1,
1Department of Neurology, Jinling Hospital, Nanjing University School of Medicine, 305# East Zhongshan Road, Nanjing, Jiangsu Province, People's Republic of China; 2Department of Neurology, Jinling Hospital, Southern Medical University, 305# East Zhongshan Road, Nanjing, Jiangsu Province, People's Republic of China

Supported By: the Natural Science Foundation of Jiangsu Province and Natural Science Foundation of China (BK2011663 and 81070923).

BACKGROUND: Posterior circulation infarction (PCI) was one of the common ischemic cerebrovascular diseases. This study aimed to evaluate the hemodynamic features in patients without stenosis of cerebral artery by assessing cerebrovascular reactivity (CVR) in the middle cerebral
artery (MCA) and vertebral arteries (VA), in order to draw the different effect CVR in the MCAs and VAs on predicts PCI.

METHODS: Twenty-seven patients with posterior circulation infarction (PCI group) were investigated. Healthy age-matched subjects during the study period were included (Controls). Transcranial Doppler combined with CO₂ inhalation test was done to assess and compare the CVR of MCA and VA in all subjects.

RESULTS: Compared with controls, a significant impairment of the CVR in MCAs (left and right) was observed (25.96±15.90 vs 34.63±8.60, P = 0.019), (26.40±14.54 vs 34.49±9.08, P = 0.021); Thus, the CVR in VA showed a gradual impairment but not up to statistical significance (P>0.05). The relationship between clinical characteristics (age, hypertension, diabetes et al) and reduction of MCA CVR by multivariate linear regression analysis revealed that diabetes was an independent determinant of CVR (β = - 0.116, P = 0.035).

CONCLUSIONS: Impaired MCA CVR remains an independent predictor of posterior circulation, ischemic infarction, but not VA CVR, which suggests an independent cerebral vascular reserve capacity of the posterior circulation.

P28
Application of Noninvasive Imaging Techniques in Detection of Unstable Carotid Plaques

C. Z. Liang, H. B. Liu, D. Y. Yin, Department of Cardiology, Chinese PLA General Hospital, Beijing, 100853, China

OBJECTIVE: This study aimed to evaluate the utility of dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI) and positron emission tomography (PET-CT) in detection of carotid atherosclerotic plaques, so as to provide clinical basis for carotid atherosclerosis early warning by comparing inflammatory reactions in different plaques.

METHODS: Included in this study were 41 patients with carotid intima-media thickness (IMT) > 2mm who underwent MRI and PET. Results from MRI and PET were analyzed, such as fiber caps on the surface of atherosclerotic plaques and vascular compositions in plaques. The location of plaques was marked by MRI and the standard target background ratio (TBR) was calculated. The inflammation reactions in different plaques were compared and the unstable plaques were identified. Neovascularization volume in plaques was expressed as plasma volume (VP), and Ktrans of plaques were detected by MRI and inflammatory activity of macrophages was defined by TBR in plaques detected by PET. Relations between VP and TBR, Ktrans and TBR were analyzed.

RESULTS: The TBR value was significantly higher in the patients with ruptured fiber caps than in those with intact fiber caps. The TBR value was the highest in bleeding plaque followed by in lipid plaque, collagen plaque, and calcified plaque. Significant difference was found in the TBR value among other plaques except for collagen plaque and calcified plaque. The TBR was not related with the plasma volume and Ktrans.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Scan layers (%)</th>
<th>TBR(max)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. TBRmax comparison between different fiber caps
<table>
<thead>
<tr>
<th>Plaque components</th>
<th>Scan layers (%)</th>
<th>TBR(max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No fiber caps</td>
<td>730 (70.80%)</td>
<td>1.233±0.231</td>
</tr>
<tr>
<td>Thick fiber caps</td>
<td>250 (24.24%)</td>
<td>1.269±0.283</td>
</tr>
<tr>
<td>Thin fiber caps</td>
<td>42 (4.07%)</td>
<td>1.355±0.176</td>
</tr>
<tr>
<td>Fiber caps rupture</td>
<td>9 (0.8%)</td>
<td>1.496±0.124</td>
</tr>
</tbody>
</table>

Table 2. TBRmax comparison between different plaque components

<table>
<thead>
<tr>
<th>Plaque components</th>
<th>Scan layers (%)</th>
<th>TBR(max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcified plaque</td>
<td>209 (20.27%)</td>
<td>1.245±0.125</td>
</tr>
<tr>
<td>Collagen plaque</td>
<td>40 (1.55%)</td>
<td>1.243±0.200</td>
</tr>
<tr>
<td>Lipid plaque</td>
<td>296 (28.71%)</td>
<td>1.350±0.214</td>
</tr>
<tr>
<td>Plaque hemorrhage</td>
<td>16 (1.55%)</td>
<td>1.551±0.138</td>
</tr>
</tbody>
</table>

Table 3. Relationship in VP and Ktrans

<table>
<thead>
<tr>
<th></th>
<th>TBR&lt;1.25 (n=94)</th>
<th>TBR≥1.25 (n=61)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ktrans</td>
<td>0.03±0.03</td>
<td>0.03±0.03</td>
<td>0.67</td>
</tr>
<tr>
<td>Vp</td>
<td>0.05±0.05</td>
<td>0.05±0.04</td>
<td>0.61</td>
</tr>
</tbody>
</table>

CONCLUSION: Combined application of noninvasive technologies MRI and PET/CT can be used in early diagnosis and evaluation of carotid atherosclerosis, but there is not significant correlation in new blood vessels and inflammatory cells.

P29
Primary Culture and Identification of SD Rat Aortic Smooth Muscle Cells by Tissue Explants

H. Y. Shen¹, J. Bai¹, Z. Tang¹, X. H. Liu², Y. Wang¹. Institute of Geriatric Cardiology, Chinese PLA General Hospital, Beijing, China; ² Pathophysiology Laboratory, Chinese PLA General Hospital, Beijing, China

BACKGROUND: Vascular smooth muscle cells (VSMCs) were the main component of artery medial layer. Modulation of VSMCs phenotype, VSMCs migration, and hypertrophy are recognized as key events in the development of arterial lesions in vascular diseases, such as vascular calcification, atherosclerosis, pulmonary hypertension, and restenosis after coronary artery bypass graft and stent implantation. Thus primary culture of VSMCs provides a useful tool for the study of the molecular mechanisms of cardiovascular diseases.

METHODS: SD rat aorta was obtained under sterile conditions. The medium was teared out and cut into 1mm³ tissue explants. The tissue pieces were plated and distributed evenly in the flask. After 4-6h the culture medium (DMEM containing 20% FCS) was added. To identify the purity of VSMCs with this method, immunofluorescent staining against α-smooth muscle actin was performed.

RESULTS: The RASMC were successfully cultured by the adherent method of tissues explants. The
cells grew out slowly from the original explant approximately after 5-7 days. It took approximately 10-14 days to become nearly 80% of confluent and then the cells could be subcultured. VSMCs grew in the “peak and valley” mode. VSMCs could be passaged to 20 generations. And the number of α-SM-actin positively stained cells was counted under an immunofluorescent microscope with a purity of more than 95%.

**CONCLUSIONS:** The primary culture of SD rat aortic smooth muscle cells with the adherent method of tissue explants can stably grow. The method is simple and convenient. It yielded a purity of more than 95% of the VSMCs identified. Immunofluorescent staining assay may be a useful research tool.

**P30**

**Renal Sympathetic Denervation for Resistant Hypertension in Elderly Hypertensive Patients**

X. D. Sheng, X. Q. Jin, Z. C. Zhu, *Department of Cardiology, Changshu No. 2 People’s Hospital, Jiangsu, China*

**BACKGROUND:** Renal sympathetic denervation (RSD) is effective and safe for refractory hypertensive patients. This paper aimed to assess the effectiveness, safety and feasibility of RSD for elderly refractory hypertensive patients.

**METHODS:** Office blood pressure were recorded before and 1, 3, 6 months after procedure in 20 elderly refractory hypertension patients who underwent RSD. Ambulatory blood pressure, serum levels of creatinine, estimated glomerular filtration rate (eGFR), rennin activity, angiotensin II and aldosterone were also measured before and after procedure. Complications of percutaneous RSD were observed.

**RESULTS:** The office blood pressure were 16.9/11.9 mmHg, 24.8/17.1 mmHg, 29.1/20.5 mmHg and 24.2/17.2 mmHg lower 1, 3, 6 months after percutaneous RSD from 171.0±12.5/92.8±10.9 mmHg before RSD (P<0.0001, respectively). There was significant difference in ambulatory blood pressure before and after RSD (158.8±10.3/89.2±10.9 mmHg vs 134.6±12.0/72.0±11.5 mmHg, P<0.0001). No significant difference was found in serum creatinine level and eGFR before and after RSD (P>0.05). The creatinine, angiotensin II and aldosterone levels were significantly lower after RSD than before percutaneous RSD (2.31±1.63 ng/mL·h VS 1.84±1.19 ng/mL·h, P<0.05, 130.42±114.18 ng/L VS 106.55±96.27 ng/L, P<0.001, 149.28±27.8 ng/L VS 141.05±31.92 ng/L, P<0.01, respectively). Femoral artery hematoma was detected in 1 patient.

**CONCLUSIONS:** RSD is a safe, effective and feasible procedure for elderly refractory hypertension patients.

**P31**

**Dynamic Changes and Clinical Significance of Serum P-selectin and Bilirubin in Elderly Patients with Cerebral Infarction**

J. L. Su, Y. Liu, Z. Y. Xia, X. F. Yang, *Department of Neurology, Liaocheng People’s Hospital, Liaocheng, China*

**OBJECTIVES:** To evaluate and explore the dynamic changes and clinical significance of serum...
P-selectin and bilirubin in elderly patients with Acute Cerebral Infarction (ACI).

METHODS: Serum levels of P-selectin, bilirubin and high sensitivity C-reactive protein (hsCRP) were measured in different time and degree for 98 patients (mean age 69.5±7.3 years) with cerebral infarction. Mild ACI group (n=38), moderate ACI group (n=35) and Severe ACI group (n=25) were selected according to their nerve function deficiency score, and thirty healthy subjects (mean age 68.2±6.7 years) served as a control group.

RESULTS: The serum levels of serum P-selectin and hsCRP were significantly higher in acute cerebral infarction than those of patients with normal controls in 1 d, 3 d, 7 d after stroke onset [mild ACI group: P-selectin (48.79±6.67, 85.96±10.91, 72.45±11.29 vs 6.45±1.86), hsCRP (3.34±0.48, 4.82±0.77, 4.02±0.74 vs 2.01±0.35); moderate ACI group: P-selectin (78.19±14.99, 107.14±24.33, 91.47±21.08 vs 6.45±1.86), hsCRP (8.08±1.16, 9.08±1.38, 7.47±1.43 vs 2.01±0.35); Severe ACI group: P-selectin (85.51±18.53, 135.2±34.01, 99.28±27.04 vs 6.45±1.86), hsCRP (9.49±1.66, 8.73±1.63, 7.51±1.36 vs 2.01±0.35), respectively] (all p<0.05). Similarly, bilirubin levels in acute cerebral infarction were significantly higher than those of patients with normal controls in 1 d, 3 d, 7 d after stroke onset and no obviously significance in 14 d. P-selectin, bilirubin and high sensitivity C-reactive protein levels in patients with moderate and severe patients were higher than that of in mild form patients (p<0.05). There were no obvious significance of P-selectin concentration in three group patients in 14 d (p>0.05), but high sensitivity C-reactive protein was significantly higher than those of patients with normal controls (p<0.05) in 14 d.

CONCLUSIONS: Serum P-selectin and bilirubin may be involved in the pathological process of ACI. Measuring the level of P-selectin and bilirubin may be helpful for early diagnosis and prognosis of cerebral infarction.

P32 Effects of Loading-dose Rosuvastatin on the Expression of PDCD4 in CD4+T Lymphocytes from Unstable Angina Patients during Perioperative Period of PCI

Q. Su, L. Li, W. Q. Huang. Department of Cardiology, the First Affiliated Hospital of Guangxi Medical University, Guangxi, China

BACKGROUND: Excessive activity of CD4+ T lymphocytes and increased secretion of various inflammatory factors occurred in patients with coronary artery disease. This study aimed to investigate the effects of loading dose of rosuvastatin on the expression of PDCD4 in CD4+T lymphocytes from unstable angina patients during perioperative period of PCI.

METHODS: A total of 92 unstable angina patients were enrolled. Unstable angina patients were randomized to pretreatment with loading dose of rosuvastatin (20mg/d, n=46) or conventional dose of rosuvastatin (10mg/d, n=46). Circulating CD4+T cells were obtained by magnetic cell sorting system (MACS) at baseline and post-PCI 18-24h. At the gene level, real-time fluorescent quantitative polymerase chain reaction (RFQ-PCR) was used to measure the levels of PDCD4 in CD4+ T lymphocyte. At the protein level, the expression of PDCD4 was detected with Western blot analysis. Serum levels of TNF-α were quantified by enzyme-linked immunosorbent assay (ELISA).

RESULTS: Of the 92 patients with unstable angina that were examined, levels of PDCD4 mRNA and protein were found to decrease dramatically in patients that received a loading dose of rosuvastatin following PCI (mRNA: 11.84±0.73 vs. 7.02±0.55; Protein: 1.29±0.14 vs. 0.47±0.06, P<0.05). In
contrast, serum levels of TNF-\(\alpha\) significantly increased following PCI in both the loading dose group and the conventional dose group, with the latter being higher than the former (\(9.51\pm 1.93\) vs. \(14.62\pm 2.45\) ng/L, \(P<0.05\)) .

CONCLUSIONS: Loading dose of rosvastatin pretreatment resulted in reduction of post-PCI myocardial inflammation through inhibiting the expression of PDCD4 in CD4+T lymphocytes.

P33
Correlation between Microbleeds and Gait Disorders among Elderly Patients with Cerebral Small Vessel Disease

F. Sun\(^1\), H.Y. Guo\(^2\), Y. He\(^1\), Q.L. Peng\(^1\), G.Q. Zhou\(^1\), Z.X. Zhao\(^3\), \(^1\)Department of Geriatric Neurology, Nanjing School of Clinical Medicine, The Second Military Medical University, Nanjing 210002, Jiangsu, China; \(^2\)Department of Medical Imaging, General Hospital of Nanjing Military Command, Nanjing 210002, Jiangsu, China; \(^3\)Department of Neurology, Changzheng Hospital Affiliated to the Second Military Medical University, Shanghai 200003, China

BACKGROUND: Gait disorders are common in elderly people. Previous research showed that gait disorders correlated closely with white matter lesion which is one of the main types of cerebral vessel disease. This study aimed to identify the relation between microbleeds and gait disturbances among elderly patients with cerebral small vessel disease.

METHODS: MRI scanning was performed in 232 elderly veterans with cerebral small vessel disease. The number and location of cerebral microbleeds were rated. Gait was assessed with 8m walking test, Tinetti and Timed-up-and-go tests. Microbleeds were related to gait parameters by lacunar infarcts and white matter lesions-adjusted linear regression.

RESULTS: Cases of microbleeds were 47 (20.3%) among all subjects. 20 cases of microbleeds were strictly lobar-located. A higher number of microbleeds was independently related to shorter stride length (regression coefficients -0.02,\(\beta\) -0.13,\(p\) 0.028), wider stride width (regression coefficients 0.21,\(\beta\) 0.08,\(p\) 0.037) and poorer performance on clinical gait scales :Tinetti test (regression coefficients -0.19,\(\beta\) -0.21,\(p\) 0.006);Timed-up-and-go-test(regression coefficients 0.02,\(\beta\) 0.17,\(p\) 0.015).According to location, lobar microbleeds were independently associated with stride length(regression coefficients -0.06,\(\beta\) -0.13,\(p\) 0.009), stride width(regression coefficients -0.14,\(\beta\) -0.12,\(p\) 0.007) and clinical gait scales:Tinetti test (regression coefficients -0.31,\(\beta\) -0.22,\(p\) 0.003);Timed-up-and-go-test(regression coefficients 0.06,\(\beta\) 0.14,\(p\) 0.004).Deep microbleeds were also independently associated with stride length(regression coefficients -0.11,\(\beta\) -0.09,\(p\) 0.018), stride width(regression coefficients -0.16,\(\beta\) -0.10,\(p\) 0.012) and clinical gait scales:Tinetti test (regression coefficients -0.53,\(\beta\) -0.19,\(p\) 0.006);Timed-up-and-go-test(regression coefficients 0.04,\(\beta\) 0.11,\(p\) 0.009). (\(p<0.05\), \(p<0.01\)). Lobar and deep microbleeds were independently associated with stride length, stride width and clinical gait scales (\(p<0.05\), \(p<0.01\)).

CONCLUSIONS: Microbleeds may be associated with gait disturbances, independently of other coexisting markers of cerebral small vessel disease.

P34
Associations of High Sensitive C-Reactive Protein and Neutrophil to Lymphocyte
Ratio with Acute Coronary Syndrome

X.D. Wang, G.Y. Zhang, H.L. Zhu, Z.L. Jiang, X.Y. Li. Department of Cardiology, Renmin Hospital of Wuhan University, Wuhan, China; Department of Cardiology, Zhongnan Hospital of Wuhan University, Wuhan, China

OBJECTIVE: To investigate the relationships of high sensitive C-reactive protein (hs-CRP) and neutrophil to lymphocyte ratio (NLR) with acute coronary syndrome (ACS) and degree of coronary artery stenosis.

METHODS: This cross-sectional study was conducted among 148 patients with ACS, among whom 60 had unstable angina pectoris (UAP) and 88 had acute myocardial infarction (AMI), and a control group of 60 patients with normal coronary arteries. The hs-CRP, white blood cell count, neutrophil count and lymphocyte count were measured, NLR was calculated. The degree of coronary artery stenosis was determined by Gensini scores system. Statistical analyses were performed using SPSS 17.0.

RESULTS: The hs-CRP, white blood cell count and NLR were higher in AMI group compared with that of control group [6.47 (1.49, 19.94) vs. 0.96 (0.42, 1.45) mg/L, (7.03± 2.68) vs. (6.01± 1.36)×10⁹, 3.21 (2.34, 5.29) vs. 1.90 (1.34, 2.53), P<0.01]. The hs-CRP was higher in UAP group compared with control group [1.55 (0.60, 3.99) vs. 0.96 (0.42, 1.45), P<0.01]. After multivariate logistic regression analysis, the hs-CRP, smoking, and uric acid were independent risk predictors of UAP (P<0.05). The hs-CRP, NRL and smoking were independent risk predictors of AMI (P<0.05). Subjects were divided into 4 groups according to their interquartile range of hs-CRP and NLR. After adjustment of gender, smoking history, white blood cell count, high density lipoprotein cholesterol (HDL-C) and uric acid, it was found that hs-CRP (OR 4.51, 95% CI 1.46-13.98 in the 4th quartile vs. 1st quartile, P<0.01), NLR (OR 7.51, 95% CI 2.13-26.46 in the 3rd quartile vs. 1st quartile, P<0.01) and NLR (OR 10.13, 95% CI 2.71-37.86 in the 4th quartile vs. 1st quartile, P<0.01) were inversely associated with acute myocardial infarction. The degree of coronary artery stenosis was positively and significantly correlated with hs-CRP (r=0.402, P<0.001), NLR (r=0.236, P=0.001), white blood cell count (r=0.175, P<0.05), uric acid (r=0.232, P=0.001) and serum creatinine (r=0.246, P<0.001), whereas a significantly negative correlation was observed with HDL-C (r=−0.174, P<0.05).

CONCLUSIONS: Hs-CRP is an independent risk predictor of ACS. NLR is an independent risk predictor of AMI. Hs-CRP and NLR are closely related to the degree of coronary artery stenosis.

P35

The Expression of Phosphatase and Tensin Homolog Deleted on Chromosome (PTEN) in CD4+T Lymphocytes from Unstable Angina Patients during Perioperative Period of PCI

J. Y. Wang, L. Li, Q. Su, Y. Zhou, Y. Liu, Department of Cardiology, the First Affiliated Hospital of Guangxi Medical University, Nanning, Guangxi Zhuang Autonomous Region, China. Supported By: National Natural Science Foundation of China (81160046), Graduate Research and Innovation Project of Guangxi (YCSZ2013033)

BACKGROUND: Accumulated evidence suggests that lymphocytes might be involved in the PCI
perioperative myocardial injury, but the exact mechanism remains unclear. This study aimed to investigate the expression of phosphatase and tensin homolog deleted on chromosome (PTEN) in CD4+T lymphocytes from unstable angina patients during perioperative period of percutaneous coronary intervention (PCI).

METHODS: A total of 42 unstable angina patients (mean age 62±8 years, n=42) were enrolled. Circulating CD4+T cells were obtained by magnetic cell sorting system (MACS) at baseline and post-PCI 16~24h. At the gene level, real-time fluorescent quantitative polymerase chain reaction (RFQ-PCR) was used to measure the levels of PTEN in CD4+ T lymphocyte. At the protein level, the expression of PTEN was detected with Western blot analysis. Serum TNF-α and IL-10 levels were quantified by enzyme-linked immunosorbent assay (ELISA).

RESULTS: Compared with pre-PCI, the incidence of cTnI elevating above normal level was 45.4% in post- PCI, and the expression of PTEN mRNA (1.25±0.27 vs 2.86±0.36, p<0.05) and protein levels (0.46±0.17 vs 0.83±0.16, p<0.01) were dramatically decreased in post- PCI (P<0.05). Serum level of TNF-α was dramatically increased in post-PCI [(7.46±1.46)ng/L vs (12.34±2.34) ng/L, P<0.05], and the serum level of IL-10 was decreased in post-PCI [(8.63±1.26)ng/L vs (5.24±1.85)ng/L, P<0.05]. By linear correlation analysis, it was found that, PTEN protein expression and TNF-α concentrations were negatively correlated (r= -0.874, p<0.01), and IL-10 concentrations were positively correlated(r=0.732, p<0.05).

CONCLUSIONS: These results suggest that PCI may down-regulate the expression of PTEN in CD4+T lymphocytes, and PTEN play a critical role in post-PCI myocardial inflammation injury.

P36 Comparative Proteomic Analysis of Plasma from Hypertensive Patients after Valsartan Treatment

Z.G. Wang, X.Y. Peng, M. Li, B. Zhang, L.J. Wang, J.L. Liu, Y. Liu, Y.X. Wei, S.J. Wen. Beijing Institute of Heart, Lung, Blood Vessel Diseases, Beijing Anzhen Hospital, Capital Medical University, Beijing, 100029, China

BACKGROUND: This study was designed to investigate the plasma proteomic profile of untreated essential hypertensive (EH) patients and EH patients treated with angiotensin II type 1 receptor antagonist (AT1RA) valsartan, which may lead to better understanding of potential pathogenic mechanisms, early diagnosis, prevention and treatment of hypertensive left ventricle hyperplasia (LVH).

METHODS: Twenty-one healthy normotensive subjects (NT group), 21 untreated EH patients (EH group), and 42 valsartan-treated EH patients, 21 with LVH (EHT1 group) and 21 without LVH (EHT2 group) were included in this study. Proteins in plasma samples were analyzed by two-dimensional electrophoresis. Differentially expressed proteins were identified by tandem mass spectrometry and verified by Western blotting.

RESULTS: A total of 22 differential-intensity protein spots representing 18 distinct proteins, including those related to inflammation and immunity, lipid metabolism, transport, cell proliferation and apoptosis, coagulation and fibrinolysis, and antioxidation, were observed in EH group. Compared to NT group, there were 16 proteins up-regulated and 6 down-regulated in EH group, 10 up-regulated and 2 down-regulated in EHT1 group, 9 up-regulated and 2 down-regulated in EHT2 group. When
compared to EH group, 17 differential-intensity protein spots were found (4 were up-regulated and 13 were down-regulated) in EHT1 group, and 20 spots (5 were up-regulated and 15 were down-regulated) in EHT2 group (*P < 0.05*, *P < 0.01*). When compared to EHT1 group, there were 17 differential-intensity protein spots, including 3 up-regulated and 14 down-regulated spots (*P < 0.05*, *P < 0.01*). The protein levels in the EHT2 group were more effectively restored toward NT-group level (*P < 0.01*) than those in the EHT1 group (*P < 0.05*), but remained elevated compared to normal levels, despite effective BP control.

**CONCLUSIONS:** Plasma proteomic abnormalities in EH are complex, and valsartan treatment is effective, not curative.

---

**P37**

**Analysis of Treatment and Prognostic Factors in Patients with Symptomatic Carotid Artery Total Occlusion after Vascular Recanalization**

Z.Y. Xia, H. Yang, C.J. Guo, Department of Neurology, Liaocheng People's Hospital and Liaocheng Clinical School of Taishan Medical University, Liaocheng, Shandong, China

**OBJECTIVE:** To explore the safety, efficiency and prognostic factors of vascular recanalization in patients with symptomatic carotid artery total occlusion.

**METHODS:** Sixty two patients with symptomatic carotid artery total occlusion were divided into two groups: antery-intervention therapy group (21 patients) and drug treatment group (41 patients). The major end-point outcome of follow-up survey was the 2-year functional prognosis evaluated by modified Rankin Score (mRS), while the minor one was the cardiovascular events.

**RESULTS:** After 3 month, 6 month, 9 month, 1 year and 2 year follow up, the average modified Rankin Score was lower in the antery-intervention therapy group than that of drug treatment group. The differences were statistically significant (*P<0.05*, *P<0.01*) (see Table 1). For 2 year follow up, logistic regression analysis showed that mRS were related to smoking (OR=11.680, 95%CI 1.174~116.246; *P=0.036*), baseline NIHSS (OR=25.993, 95% CI 1.750~386.00; *P=0.018*), and antery-intervention therapy (OR=0.017, 95%CI 0.001~0.241; *P=0.003*). Antery-intervention therapy was an independent protective factor.

**Table 1. Comparison of modified Rankin Scale scores between study and control group**

<table>
<thead>
<tr>
<th>Times</th>
<th>Study (n=21)</th>
<th>Control (n=41)</th>
<th><em>P value</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (mean Rank)</td>
<td>27.00</td>
<td>33.80</td>
<td>0.147</td>
</tr>
<tr>
<td>3 months (mean Rank)</td>
<td>24.62</td>
<td>35.02</td>
<td>0.027</td>
</tr>
<tr>
<td>6 months (mean Rank)</td>
<td>25.21</td>
<td>34.72</td>
<td>0.045</td>
</tr>
<tr>
<td>12 months (mean Rank)</td>
<td>23.21</td>
<td>35.74</td>
<td>0.008</td>
</tr>
<tr>
<td>24 months (mean Rank)</td>
<td>21.60</td>
<td>34.64</td>
<td>0.004</td>
</tr>
</tbody>
</table>

**CONCLUSIONS:** For patients with symptomatic carotid artery total occlusion, vascular recanalization may be safe and effective. It is probably an independent protective factor of functional prognosis in the patients.

---

**P38**

**Ultrasound Diagnosis of Anomalous Origin of Vertebral Artery and Its Clinical**
Application

L.J. Yang, J.F. Zhang. Department of Neurology, Central Hospital, Baotou, Inner Mongolia Autonomous Region, China

BACKGROUND: Anomalous origin of vertebral artery is a rare variation and often combined with other types of variations. Because of the low incidence and low detection rate, anomalous origin of vertebral artery is often ignored by clinicians. This study aimed to use color doppler ultrasound to exam vertebral artery origin and other variations and to further improve clinical understanding of vertebral artery variations and to provide some objective diagnostic basis for clinicians.

METHODS: One hundred and twenty-three patients with anomalous origin of VA diagnosed by CDFI were retrospectively analyzed.

RESULTS: One hundred twenty-three patients with anomalous origin of the vertebral artery were identified, and the incidence of the variation was 3.63%. Of the 123 patients, there were 122 patients with anomalous origin of the left VA from the aortic arch, including 3 patients with anomalous origin alone, 77 patients with variations of both VA origin and its level of entry into the TF, 43 patients with variations of both VA origin and its level of entry into the TF, and hypolastic vertebral artery. The ratio was 2%, 63%, 35% respectively. Only one patient had anomalous origin of the right VA from the right common carotid artery and the course variation.

CONCLUSION: CDFI is a useful noninvasive imaging tool for the diagnosis of VA variation, such as anomalous origin, hypolastic vertebral artery, et al.

P39

Associations between Two Single Nucleotide Polymorphisms of COX-2 Gene with Acute Coronary Syndrome

Z.Y. Chen¹, D.H. Zhao¹, S.S. Li¹, J. Li¹, Z.W. Xu¹, B. Wang². ¹Department of Neurology, Aerospace Center Hospital, Beijing 100049, China; ²Department of Cardiology, Aerospace Center Hospital, Beijing 100049, China

OBJECTIVE: To study the association between cox-2 gene polymorphism at -1195G>A and -765G>C and acute coronary syndrome (ACS) of different gender in Chinese Han people.

METHODS: Two hundred and fifty ACS patients (age ranges from 34 to 93, mean age 62.3±11.1 years) served as the ACS group and 266 subjects (age ranges from 35 to 88, mean age 62.2±10.8 years) undergoing physical examination served as the control group in this study. Their COX-2 gene polymorphism at -1195G>A and -765G>C were genotyped by RT-PCR. The association between COX-2 gene polymorphism at -1195G>A and -765G>C was analyzed by multivariate logistic regression analysis and the haplotype analysis was analyzed using the SHEsis software.

RESULTS: Significant difference of the frequency distributions of -1195G>A was observed in male ACS patients and control groups (23.4%, 50.6%, 26.0% vs 33.8%, 49.3%, 16.9%, P=0.049). The frequency of -1195A allele and GA+AA genotype was significantly higher in male ACS patients than in controls (51.3% vs 41.5%, P=0.014; 76.6% vs 66.2%, P=0.042). Multivariate logistic regression analysis showed that the risk factors for ACS were significantly different (OR=1.971, 95%CI:1.130-3.438, P=0.017). No significant difference was found in frequency of -1195G>A and
allelic gene between female ACS and controls ($P>0.05$). No relationship between the -765G>C polymorphism and risk of ACS was observed. Haplotype analysis displayed that the frequency of A-1195-765-G was significantly higher in male ACS patients than in controls (42.6% vs 33.0%, $P=0.012$), with no significant difference in female ACS patients ($P>0.05$).

**CONCLUSIONS:** This study suggests that -1195G>A polymorphism and A-1195-765-G haplotype of COX-2 were associated with susceptibility to ACS among males, and no consistent associations were found for females in the Chinese population.

**P40**

Relationship between Serum Resistin Level and Peripheral Artery Occlusive Disease in the Elderly Male Patients

B.P. Zhu$^1$, X.M. Wu$^1$, F.Li$^2$, H.Cui$^2$, H. Wang$^2$, Y.D. Li$^1$  
$^1$Department of Cardiology, Yi Yang Central Hospital, Yi Yang, China; $^2$Department of Geriatric Cardiology, PLA General Hospital, Beijing, China

**BACKGROUND:** The resistin has been suggested to be an important risk factor of many diseases, including atherosclerosis. The study aimed to identify the relationship between the serum resistin level in elderly male and the peripheral arterial occlusive disease (PAOD).

**METHODS:** Elderly male patients ($n=843$) were divided into PAOD group ($n=165$) and non-PAOD group ($n=678$). Serum resistin, TG, TC, HDL-C, LDL-C, fasting glucose and C-reactive protein (CRP) were measured. The spearman correlation analysis and logistic regression analysis were performed to determine the relationship between the resistin and PAOD. Then the resistin level between the PAOD group and non-PAOD group was compared.

**RESULTS:** Serum resistin in PAOD group was significantly higher than non-PAOD group [(7.26±2.94)ng/L vs (6.49±3.09)ng/L, $p<0.05$]. The serum level of resistin was independently correlated with CRP ($\beta=0.058$, $p<0.05$) and HDL-C ($\beta=-0.810$, $p<0.05$). The prevalence of PAOD increased with the level of resistin ($p<0.01$). Logistic regression analysis showed that resistin might be independently correlated with PAOD, but this relationship attenuated after adjusting the age and CRP.

**CONCLUSIONS:** Our results showed that the serum level of resistin increased in the elderly male with PAOD and might be a risk factor of the PAOD.

**P41**

Correlation between Coronary Artery Stenosis and Risk Factors for Coronary Heart Disease

X. X. Zhu, C. D. Ding, S. H. Zeng, R. Hao. Department of Internal Medicine, the NO.2 Affiliated Hospital of Anhui Medical University, Hefei, China

**OBJECTIVE:** To study the correlation between coronary artery stenosis and risk factors for coronary heart disease (CHD).

**METHODS:** Patients ($n=121$) who registered during the period of September 2012 and September 2013 were divided into either CHD group ($n=89$) or control group ($n=32$) according to their coronary angiography. Their clinical, laboratory and imaging data were analyzed by univariate and multivariate
logistic regression analysis.

**RESULTS:** The male proportion (64.0% vs. 43.8%, p=0.046), diabetes (30.3% vs. 12.5%, p=0.047) and smokers (42.7% vs. 21.9%, p=0.039), and LDL-C levels (3.1±1.0 vs. 2.7±0.3, p=0.029) were significantly higher while the LDL-C level (1.1±0.3 vs. 1.2±0.4, p=0.020) is significantly lower in CHD group than those in control group. Multivariate logistic regression analysis showed that diabetes mellitus (OR=3.769, p=0.042) and the LDL-C level (OR=1.873, p=0.021) were the independent risk factors for CHD. The number of smokers was greater in moderate and severe coronary artery stenosis patients than that in mild coronary artery stenosis patients (all p<0.01). The number of male patients, age and uric acid levels in patients with moderate coronary artery stenosis and the incidence of hypertension and diabetes in patients with severe coronary artery stenosis were significantly higher than those in patients with mild coronary artery stenosis (all p<0.05). Logistic regression analysis showed that age (OR=1.094, p=0.001), hypertension (OR=3.340, p=0.003), diabetes mellitus (OR=3.877, p=0.003) and smoking (OR=4.536, p=0.003) were the risk factors for coronary artery stenosis.

**CONCLUSIONS:** Risk factors for CHD are closely related with coronary artery stenosis. Diabetes is an important risk factor for both CHD and coronary artery stenosis.

**P42**

Cold-inducible RNA Binding Protein Can Protect Damaged Neurons under Hypothermia

Y. Cai¹, J. Y. Zheng², G. Wang³, Q. L. Wu¹, J. L. Wu¹, X. Su¹. ¹Department of Neurosurgery Institute, Tianjin Huanhu Hospital; Cerebrovascular and Neurodegeneration Key Laboratory, Tianjin, China; ²Department of Cardiology, Chest Hospital, Tianjin, China; 3.Department of Neurology, Second Affiliated Hospital of Traditional Chinese Medical University, Tianjin, China.

**BACKGROUND:** Traumatic brain injury (TBI) is a common neurosurgery disease with high morbidity and mortality rates. How to improve the life quality of patients and reduce morbidity and mortality rates are still big challenge to doctors. The science of hypothermia may be an excellent answer and holds enormous promise for traumatic brain injury.

**METHODS:** Primary rat hippocampal neurons were isolated, cultured and randomly divided into 3 groups: control group, injury group (oxygen-glucose deprived for 55min (OGD)), and treatment group (after damaged with OGD 55min,cells were cultured in hypothermia).The cell survival rate, apoptosis rate, CIRP and caspase-3 expression were evaluated by MTT, Flow Cytometry, real-time PCR and Western Blot methods.

**RESULTS:** (1) More than 95% purified neurons were received by using this culture method. (2) Compared with the control group, cell survival rate was significantly lower in injury group (43.30±5.95% vs 100±12.72%, P<.05), hypothermia treatment can increase cell survival of injured cell to 71.77±13.56% (P<.05). (3)Flow Cytometry result displayed that cell apoptosis rate was decreased from 30.73±2.51% in injury group to 19.50±0.60% in hypothermia treatment group(P<.05), but both of them were higher than control group(10.03±1.26%, P<.05). (4)Real time PCR and Western Blot analysis showed that CIRP mRNA and protein were expressed at an equally poor level in control(0.42 ± 0.05 and 0.34 ± 0.04,respectively) and injury groups(0.36 ± 0.12 and 0.32 ± 0.04,respectively), while richly expressed in treatment group (0.81±0.13 and 0.55±0.06,P<.05). At meantime, protein expression of Caspase-3 was upregulated in injured cells (0.91±0.08) than that of
control group (0.56±0.07), treatment with hypothermia can downregulate Caspase-3 protein level (0.53±0.05, P<.05). (3)Spearman correlate analysis displayed a negative correlation in CIRP and Caspase-3 protein expression (r=-0.683, P<.05). CONCLUSIONS: Hypothermia can induce a high level of CIRP in hippocampal neurons, which can protect injured neurons in a higher cell survival and inhibit cell apoptosis. Maybe this is one protective mechanism of hypothermia.

P43
Carotid and Cerebrovascular Stenosis in 197 Cases of Cerebral Infarction in Patients with type 2 Diabetes Mellitus

J. Du, F. Yang, Z. M. Qiu, G. H. Chen, X. F. Liu, Department of Neurology, Nanjing General Hospital of Nanjing Command, Nanjing Clinical Medical College of the Second Military Medical University, Nanjing, China

OBJECTIVE: To investigate the manifestation of stroke and the features of cerebrovascular atherosclerotic stenosis in 197 type 2 DM patients.

METHODS: A retrospective study was performed on clinical and lifestyle data of 197 type 2 DM patients enrolled in the Nanjing Stroke Registry Program (NSRP). Digital subtraction angiography with a digital fluoroscopic imaging system was performed in 197 type 2 DM patients and cerebrovascular atherosclerosis stenosis type, distribution, extent and obstructive nature were retrospectively analyzed and classified by segment location.

RESULTS: Mean ± SD patient age was 63.22 ± 11.04 yr including 134 (68.02%) males and 63 females (32.0%). The number of average age of males was less than that of females (61.32±10.93 vs 67.27±10.14, p<0.05). Cerebrovascular disease in DM patients was mainly distributed in the anterior cerebral circulation opposed to the posterior cerebral circulation (73.23% vs 26.77%, p<0.001). Stenosis was more frequently observed in intracranial artery than the extracranial artery (65.52% vs 34.48%, p<0.05). The most common involved arteries were anterior cerebral artery and intracranial internal carotid artery. The distribution of intracranial arteries between anterior cerebral circulation and posterior cerebral circulation was significantly different. The intracranial segment of the posterior circulation is more likely to be occluded.

CONCLUSIONS: This retrospective cohort study provides evidence to suggest the manifestation and epidemiology of stroke and atherosclerotic stenosis in diabetic patients.

P44
Expression and Significance of MUC1 and C-myc in Elderly Papillary Thyroid Carcinoma Patient

Y. J. Hu, X. Y. Luo, Y. Yang, C. Y. Chen, Z. Y. Zhang, X. Guo, Department of Head and Neck Surgery, Tangshan Gongren Hospital, Tangshan 063000, China

BACKGROUND: The mechanism of thyroid carcinoma is yet to be determined. We studied the expression and significance of MUC1 and C-myc gene in elderly papillary thyroid carcinoma.

METHODS: The expression levels of MUC1 and C-myc were examined by immunohistochemical
RESULTS: The positive rate of MUC1 in 58 specimens of thyroid carcinoma was 77.6% (45/58), while 90.0% (9/10) in those with infiltration and 88.2% (15/17) in those with metastasis. The positive rate of C-myc in 58 specimens of thyroid carcinoma was 81.0% (47/58), and 100.0% (17/17) in those with metastasis.

CONCLUSIONS: The different expressions of MUC1 and C-myc between benign and malignant thyroid tumor may be helpful in predicting thyroid carcinoma of the lymph node metastasis.

**P45**

**Changes and Significance of Extracellular Matrix in Larynx of Old Guinea Pig**

C. Li, T. Zhou, Z. Z. Tao, N. Zhan, Department of Otolaryngology Head and Neck Surgery, People’s Hospital of Wuhan University, Wuhan 430060, China

BACKGROUND: Presbyphonia gradually causes the attention of scholars. We studied the changes and significance of hyaluronic acid (HA) and collagen in the larynx of old guinea pig.

METHODS: Young guinea pigs (4 months old) and old guinea pigs (2 years old) were selected as control group and aged group for this study (n=6 for each). The expressions of HA and collagen in the larynx of guinea pigs were detected using Alcian blue and Masson trichrome methods, respectively. The images were managed using Image-Pro Plus 6.0 For Window.

RESULTS: The gray-scale values of HA in the larynx of the control group and aged group were 0.798351 and 0.694163, while those of collagen of the two groups were 0.632295 and 0.71147, respectively. The expression level of HA was lower in aged group than that of control group, while the level of collagen of aged group was higher than control group (P<0.05).

CONCLUSIONS: The decreased content of HA and increased collagen in larynx of old guinea pig may result in presbyphonia change with ageing through higher viscoelastic properties of vocal cords.

**P46**

**Effectiveness of the Self-management Model for Older Adults with Type 2 Diabetes Mellitus Living in the Community**

H. M. Li, H. J. Zhang, Y. Jiang, L. Ling, Department of Neurology, the Affiliated Hospital of Hebei University, Baoding, 071000, China

BACKGROUND: Effective control of the level of blood-glucose depends largely on diabetes mellitus patients’ self-efficacy. In this study, we evaluated the effectiveness of chronic diseases self-management model on self-efficacy for the aged patients with type 2 diabetes mellitus in communities.

METHODS: Patients with type 2 diabetes mellitus aged over 60 years were selected to form the intervention group and control group. Participants in the intervention group received the chronic diseases self-management theory-based education by expert instruction, face to face consultation and patient communication, while the control group received general community management. The scores
of self-efficacy was collected before the sessions and 3 months after the end of the sessions, and the effectiveness of the intervention was evaluated by the changes of scores, fasting blood-glucose and hemoglobin A1c (HbA1c) before and after the session.

RESULTS: The increase range of total scores of diabetes self-efficacy in the intervention group was significantly higher than that in the control group [(16.91±5.33) scores vs. (0.44±1.34) scores, \( t=21.317, P<0.01 \)], and all domains were also significantly increased in the intervention group than those in the control group (\( P<0.01 \)). The decrease ranges of fasting blood-glucose and HbA1c in the intervention group (1.81±1.67% and 0.73±1.21%, respectively) were enhanced compared with control group (\( t=6.096, P<0.01; \ t=2.930, P<0.05 \)).

CONCLUSION: The chronic diseases self-management theory-based education may improve patients’ self-efficacy and decrease the level of blood-glucose and HbA1c.

P47
The Effect of Community-based Rehabilitation Program on Post-operative Cancer-related Fatigue and Quality of Life in Esophageal Elderly Patients Undergoing Chemotherapy

Y. C. Li, the First Affiliated Clinical College of Changzhi Medical College, Changzhi 046000, China

BACKGROUND: Cancer-related fatigue can rarely rest to relieve. We investigated the effectiveness of a community-based rehabilitation and home-based aerobic exercise in reducing cancer-related fatigue and promoting the quality of life of post-operative elderly patients with esophageal cancer.

METHODS: Post-operative elderly patients (n=68) who underwent the first chemotherapy for esophageal cancer in our hospital were conveniently assigned to study group (n=34) and control group (n=34). The patients in the study group received rehabilitation of community intervention, while the patients in control group only received home-based aerobic exercise. The effect of intervention was evaluated by the Piper fatigue scale (PIPER) and the World Health Organization quality of life (WHOQOL-BREF) in the beginning of the next chemotherapy cycle.

RESULTS: After 4 weeks intervention, the scores of PIPER and WHOQOL-BREF were significantly lower in study group than those in control group (4.2±1.6 vs. 5.4±0.7, 45.3±10.0 vs. 49.9±10.7, \( t=2.334,5.334, P=0.031, 0.042 \)). The cases in degree mild of cancer related fatigue accounted for 8 cases (23.5%) in study group was significantly higher than that in control group 1 case (2.9%) (\( \chi^2=11.865, P<0.01 \)).

CONCLUSIONS: Community-based rehabilitation is a safe and feasible intervention. In respect of its better decrease the extent of cancer-related fatigue than home-based aerobic exercise in elderly patients.

P48
Analysis of Pulmonary Function Parameters in Healthy Middle-aged and Aged in Shanghai

W. Y. Ren, L. Li, R. Y. Zhao, L. Zhu, Department of Geriatrics, Zhongshan Hospital, Fudan University, Shanghai, 200032, China
BACKGROUND: It is important to assessment the age-related changes in lung function in the elderly. The objective of this study was to evaluate changes of pulmonary function parameters with increasing age in middle-aged and elderly people.

METHODS: A total of 298 subjects aged 45 years and over with normal pulmonary function and no smoking history were selected among subjects who underwent routine physical examination from Jun. 2009 to Sep. 2011. Three groups were divided by age: 45-59 years, 60-69 years, and ≥70 years. The pulmonary function was measured with routine examination methods and 13 parameters including vital capacity (VC), residual volume (RV), functional residual capacity (FRC), total lung capacity (TLC), RV/TLC, forced vital capacity (FVC), forced expiratory volume in one second (FEV$_1$), FEV$_1$/FVC, peak expiratory flow (PEF), forced expiratory flow at 25% of FVC exhaled (FEF$_{25}$), forced expiratory flow at 50% of FVC exhaled (FEF$_{50}$), diffusion capacity of the lung for carbon monoxide (D$_1$CO), and specific diffusion capacity of CO (KCO) were collected and analyzed.

RESULTS: Compared with the young adults, 7 pulmonary function parameters including VC, FVC, FEV$_1$, PEF, TLC, D$_1$CO and KCO declined significantly in healthy middle-aged and elderly people [male (3.8±0.6) L vs. (4.7±0.6) L, (3.7±0.6) L vs. (4.7±0.6) L, (3.0±0.5) L vs. (3.9±0.5) L, (8.6±1.4) L/s vs. (9.9±1.4) L/s, (5.6±0.7) L vs. (6.1±0.7) L, (22.1±5.0) ml·min$^{-1}$·mmHg$^{-1}$ vs. (28.1±6.2) ml·min$^{-1}$·mmHg$^{-1}$, (4.1±0.7) ml·min$^{-1}$·mmHg$^{-1}$·L$^{-1}$ vs. (4.9±0.8) ml·min$^{-1}$·mmHg$^{-1}$·L$^{-1}$, P<0.01; female (2.7±0.5) L vs. (3.3±0.5) L, (2.6±0.5) L vs. (3.2±0.5) L, (2.2±0.4) L vs. (2.8±0.4) L, (5.8±0.9) L/s vs. (6.4±0.8) L/s, (4.1±0.6) L vs. (4.4±0.5) L, (16.8±3.4) ml·min$^{-1}$·mmHg$^{-1}$ vs. (20.2±2.9) ml·min$^{-1}$·mmHg$^{-1}$, (4.3±0.7) ml·min$^{-1}$·mmHg$^{-1}$·L$^{-1}$ vs. (4.8±0.6) ml·min$^{-1}$·mmHg$^{-1}$·L$^{-1}$, P<0.01]. Compared with the young adults, pulmonary function parameters including RV and RV/TLC were increased [male (1.9±0.4) L vs. (1.6±0.3) L, (34.7±4.3) % vs. (26.4±4.3) %, P<0.01; female (1.5±0.3) L vs. (1.3±0.3) L, (36.1±5.3) % vs. (30.3±5.5) %, P<0.01]. Although RV increased with aging in middle-aged and elderly people, there was no statistical significance (P>0.05). FRC didn’t change obviously. FEV$_1$/FVC of old people was lower than that of young people [male (80.7±4.3) % vs. (84.2±5.6) %, P<0.01; female (82.5±5.5) % vs. (86.4±4.8) %, P<0.01], but the difference between 3 groups of middle-aged and the elderly was not significant. The FEV$_1$/FVC of men and women aged 70 and more were (80.2±4.5) % and (81.8±5.6) %, respectively.

CONCLUSION: Our results indicate that both ventilation function and diffusion function of healthy elderly people decreased with age; RV increased; FRC remained unchanged; and FEV$_1$/FVC also declined with age, but at a slower pace in middle-aged and elderly people.

P49
Differential Proteomics Analysis on Apoptosis of Retina in db/db Mice Using iTRAQ

M. Wang, M. Yin, B. Y. Li, Y. Xiao, H. Q. Gao, Department of Geriatrics, Qilu Hospital of Shandong University, Jinan 250012, China

BACKGROUND: Apoptosis is strongly linked to the irreversible pathological changes diabetic retinopathy. To study proteins of apoptosis, we analyzed the protein expression changes of retina in db/db mice using isobaric tags for relative and absolute quantitation (iTRAQ) approach.

METHODS: 8 db/db mice were chosen as the diabetic model group (DM group), 8 db/m mice as the normal control group (CC group). The animals were housed in wire-bottomed cages and received normal pellet chow and tap water in a constant environment. After 10 weeks, all mice were sacrificed, and their retina was dissected. After hematoxylin and eosin (H&E) staining, the
sections of retina were examined using light microscopy. The changes of protein expression in retina were studied using iTRAQ approach. Proteins associated with apoptosis were analyzed using ingenuity pathway analysis (IPA).

RESULTS: Compared with CC group, mice retina in DM group appeared looser structures, tissue edema and obvious telangiectasia in under light microscopy. Using iTRAQ approach, a total of 348 differential proteins were identified. Among those proteins, 16 proteins were related with apoptosis, including Ataxin-10, Protein NDRG1, mucin-4, Aquaporin-1 and annexin A4, etc. There were 8 apoptosis-related proteins of upregulation, and the other 8 proteins of downregulation in the DM group. The relationship between these proteins were analyzed and charted by IPA.

CONCLUSIONS: Apoptosis may be involved in the development of diabetic retinopathy. The identification of the apoptosis-related proteins will be helpful for further studies.

P50
Effects of Supplementing qi and Activating Blood Circulation on Platelet Inhibition Rate and Platelet Membrane Glycoprotein in Elderly Patients with Unstable Angina Pectoris Undergoing Percutaneous Coronary Intervention

P. Zhang, H. Zhang, J. Y. Mao, Department of Cardiology, Tianjin Nankai Hospital, Tianjin University of Traditional Chinese Medicine. Tianjin 300100, China

BACKGROUND: One of the main mechanisms of recurrent ischemia after percutaneous coronary intervention blood stasis due to qi deficiency. This study aimed to investigate the effects of supplementing qi and activating blood circulation method (YQHX) on platelet inhibition rate and platelet membrane glycoprotein in elderly patients with unstable angina pectoris undergoing percutaneous coronary intervention (PCI).

METHODS: Totally 177 elderly patients with unstable angina (qi deficiency and blood stasis syndrom) were randomized into two groups. 90 cases in the treatment group and 87 cases in the control group. The treatment group received YQHX for 14 days in addition to standard western medicinal treatment. Platelet inhibition rate and platelet membrane glycoprotein were measured before and 14 days after treatment.

RESULTS: After 14 days of treatment, platelet inhibition rates induced by arachidonic acid (AA) and adenosine diphosphate (ADP) in the treatment group(74.13±26.01 % and 65.34±22.58 %) were significantly increased in comparison to the pretreatment (13.27±10.14 % and 26.12±15.72 %) and control group (62.78±17.39 % and 53.91±20.43 %) respectively (P<0.01). The prevalence of aspirin and clopidogrel resistance were lower in the treated group than those in the control group (8.89% vs. 21.84%, 11.11% vs. 25.29%, P<0.05). After 14 days of treatment, the expression rates of CD62p, CD63 and PAC-1 in the treated group (3.48±1.17, 2.72±0.42, 16.11±8.74) were significantly decreased compared with pretreatment and control group respectively (P<0.01).

CONCLUSIONS: YQHX may effectively inhibit platelet function and reduce prevalence of aspirin and clopidogrel resistance in elderly patients with unstable angina undergoing percutaneous coronary intervention.

P51
Correlation of Cognitive Impairment with Ischemic Stroke-inducing Cerebral Artery
BACKGROUND: There have been few studies on the correlation of cognitive impairment with ischemic stroke-inducing cerebral artery. This study aimed to investigate relationships between different cognitive dysfunction and different intracranial arterial occlusion.

METHODS: Montreal Cognitive Assessment (MoCA) was used to evaluate neuropsychological statuses in the 250 patients, who developed first-time acute myocardial infarction for 2 weeks. MoCA scores and other neuropsychological cognitive assessment scores were recorded. Patients were grouped by the location of intracranial arterial occlusion. The neuropsychological cognitive assessment results were analyzed between groups.

RESULTS: Middle cerebral artery occlusion was correlated with impairments of visual spatial/executive, attention, language and memory (B=-1.875~1.094, P<0.05). Anterior cerebral artery and vertebral basilar artery occlusion had correlations with attention impairment (B=-3.977, B=-1.833, P<0.01). Posterior cerebral artery occlusion could cause visual spatial/executive, language and memory impairment (B=-1.714~1.095, P<0.05). No correlation of cognitive impairment characteristics with anterior choroidal artery occlusion was found.

CONCLUSIONS: Different arterial occlusion can cause different characteristics of impairment in cognitive function, which can help to predict cognitive impairment after sub-acute stroke. It suggests that some cognitive assessments must be conducted in sub-acute stroke management.

P52
Application of Montreal Cognitive Assessment Rating Scales for Screening Cognition Impairment in Elderly Patients with Cranio-cerebral Trauma

Y. Zhang, Q. J. Yao, C. Chen, Y. H. Wu, H. Wang, F. J. Zhang, Y. L. Yang, Department of Neurosurgery, Changzhou First People’s Hospital, Changzhou 213003, China

BACKGROUND: Cranio-cerebral trauma is one of important public safety. This study aimed to compare the validity of Montreal cognitive assessment (MoCA) versus mini-mental state examination (MMSE) in screening cognition impairment in elderly patients with cranio-cerebral trauma.

METHODS: Cognitive function in 40 elderly patients with cranio-cerebral trauma and 40 healthy elderly individuals were assessed by MoCA and MMSE. Receiver operating characteristic (ROC) curve analysis was performed to determine the optimal sensitivity and specificity of MoCA and MMSE.

RESULTS: The total score (19.3±5.8 vs. 26.6±2.3, t=7.38) and all the sub-test scores of MoCA were much lower in cranio-cerebral trauma patients than in the control group (Visual spatial and executive 3.7±1.3 vs. 4.8±0.5, nomenclature 2.1±1.2 vs. 2.8±0.5, attention 4.5±1.3 vs. 5.7±0.5, spoken language 1.6±1.0 vs. 2.3±0.7, abstraction 0.8±0.9 vs. 1.6±0.7, Delayed recall 1.4±1.4 vs. 3.5±1.3, orientation 5.2±1.1 vs. 6.0±0.2 (t=5.19, 3.67, 5.25, 3.45, 4.62, 6.96, 4.27, all P<0.05). The total score (24.4±5.2 vs. 27.6±1.8, t=3.72) and orientation (8.9±2.2 vs.9.4±0.8), calculation (3.9±1.6 vs. 5.0±0.2), recall (0.9±1.0 vs. 2.7±0.6), language sub-scores of MMSE were significantly decreased in the elderly patients with cranio-cerebral trauma as compared with those in the controls (t=1.39, 4.23, 9.41, P<0.05), while there were no significant differences in the immediate memory (2.9±0.6 vs 2.7±0.5) and language scores (7.8±1.5 vs 7.9±0.9) between the two groups (both P>0.05). The area under the
receiver-operating characteristic curve showed that MoCA (0.92±0.03) > MMSE (0.74±0.06) (Z=2.460, P<0.01). When we screened the cognition impairment in elderly patients with cranio-cerebral trauma, the best cut-off scores of MoCA and MMSE were 24.5 and 27.5 respectively.

CONCLUSIONS: Cognition impairment is decreased in elderly patients with cranio-cerebral trauma. The MoCA is superior to the MMSE as a screening instrument in detecting cognition impairment in elderly patients with cranio-cerebral trauma.

P53
Analysis of Structural, Content and Language Characteristics of English Abstracts in Domestic and International Geriatrics Journals

L. Meng, P. L. Yu, Editorial Board of Beijing Hospital of Ministry of Health, Beijing, 100730, China

BACKGROUND: We analyze the structural, content and language characteristics of English abstracts in ten domestic and international geriatric journals to promote international exchange of geriatric medicine research in our country.

METHODS: This paper analyzed the characteristics and contents of original articles published in 5 foreign journals (IF>3.0) from Pubmed database and 5 core (the source of statistics) domestic geriatric journals from Wanfang web (n=60 for each) by analysis tools in recent 3 years.

RESULTS: Our survey showed that four-heading structured abstracts were used in the domestic geriatric journals despite article type, while non-structured abstracts were mostly applied in articles on basic research, and structured abstracts primarily appeared in clinical or research papers in foreign geriatric journals. Compared with foreign geriatric journals, English abstracts of the domestic geriatric journals had some problems such as abbreviation, repetition of objective with title, lack of description of research background, improper description of results data, more passive voice, improper use of modal verbs.

CONCLUSIONS: The domestic geriatric journals should follow the diverse forms of abstracts and content structure in foreign geriatric journals, strengthen the elaboration of background and highlights, and use of active voice to be in line with the international mainstream.

P54
Study of P300 in Senile Patients with Depression: a Meta-analysis of Domestic Literature

Y. Shen, Z. X. Chen, W. D. Jin, Y. C. Ma, W. Wang, Zhejiang University School of Medicine, Hangzhou, 310012, China

BACKGROUND: P300 is a valuable assessment tool for depression in older adults. The study aimed to assess the latency and amplitude changes in P300 in senile patients with depression.

METHODS: 13 domestic published study articles that met our criteria were searched from CBM, CNKI, and a meta-analysis on P300 latency and amplitude was performed with RenMan 4.1 soft.

RESULTS: 1. The P300 latency in senile patients with depression was significant longer than that in
The amplitude in senile patients with depression was significantly lower than that in senile normal controls in N2, P2, P3 (P2: \( WMD=-0.83, 95\% CI: -1.07 \sim -0.59, Z=6.78, P<0.01 \); N2: \( WMD=-0.34, 95\% CI: -0.59 \sim -0.08, Z=2.57, P=0.01 \); P3: \( WMD=-2.54, 95\% CI: -2.75 \sim -2.33, Z=23.99, P<0.01 \)).

CONCLUSIONS: P300 longer latency and lower amplitude are the statistically characterized features for senile depressive patients.

P55
Prospective Study of Falls and Risk Factors for Falls in Community-dwelling Elderly People in Beijing

J. Shi, P. L. Yu, Y. K. Tao, B. Y. Zhou, C. B. Duan, C. F. Zhang, Z. H. Qin, Z. Q. Sun, School of Public Health, Central South University, Changsha 410078, China

BACKGROUND: Falls is a common issue in older adults and placed a big burden on them. The aim of this study was to investigate the incidence of falls, and to explore the risk factors for falls and subsequent falls in community-dwelling elderly.

METHODS: A cross-sectional study was conducted in a community of district in Beijing in 2005. People aged 60 years and over were selected with stratified cluster sampling. A follow-up survey was conducted in the same community in 2009. Information about any falls during the past year was collected with a standardized structured questionnaire by face-to-face interview. Binary logistic regression analysis was used to explore related factors for falls and subsequent falls in the elderly.

RESULTS: Among 1512 interviewees at baseline, the incidence of falls was 18.0% (272) during the past year; the incidence was higher among women than among men (20.1% vs. 14.9%, \( \chi^2 =7.45, P=0.006 \)). In follow-up survey, the incidence of falls among 472 interviewees was 17.8% (84) within the past 12 months. Among the 170 persons with a fall history in the baseline survey, 49 fell in 2009, with the incidence rate of subsequent falls 28.8%. Risk factors for falls were female gender (\( OR=1.56 \)), higher family monthly income (\( OR=1.28 \)), living alone (\( OR=1.68 \)), negative emotion (\( OR=1.41 \)), fear of falls (\( OR=1.72 \)), abnormal dynamic balance (\( OR=1.50 \)), impaired vision (\( OR=1.24 \)) and poor ability of daily life (\( OR=1.74 \)). Risk factors for subsequent falls included higher family monthly income (\( OR=2.17 \)), fear of falls (\( OR=2.20 \)) and living alone (\( OR=4.67 \)), while protective factors included easy access to daily necessities (\( OR=0.41 \)) and good lighting in surrounding environment (\( OR=0.35 \)).

CONCLUSIONS: The incidence of falls is higher among older community-dwellers in Beijing. Falls in the elderly might have been influenced by various factors, which suggests the intervention strategy should be targeted at those related factors as well as focusing on primary prevention.

P56
Correlation between Cystatin C and Target Organ Damage in Elderly Hypertension

X. Y. Tan, X. H. Chen, C. M. S, Department of Geriatrics, Huizhou First Hospital, Huizhou 516000, China
BACKGROUND: Cystatin C (Cys C) has been proved to be associated with cardiovascular disease. The study aimed to investigate correlation between cystatin C (Cys C) and target organ damage (TOD) in elderly hypertension and its clinical significance.

METHODS: One hundred patients with TOD in elderly hypertension were selected as an observation group. One hundred patients without TOD in elderly hypertension were recruited as the control group. And 60 healthy aged persons were recruited as healthy group. Serum concentration of Cys C in all cases was measured by the particle-enhanced nephelometric immunoassay. At the same time, serum creatinine (Scr), urine albumin (uALB) and left ventricle mass index (LVMI) via ultrasonography were also detected. Correlation of Cys C with the above measurements was analyzed.

RESULTS: The Cys C concentration was significantly higher in observation group [(1.84± 0.32) mg/L] than in contrast [(0.92± 0.36) mg/L] and healthy groups [(0.85± 0.34) mg/L] (F=88.43, P=0.000). However, the difference in level of Cys C was not statistically significantly different between control group and healthy group (P>0.05). In observation group, serum concentration of Cys C was positively correlated with Scr, uALB and LVMI (r=0.420, 0.526, 0.470, P=0.021, 0.019, 0.034) after adjusting age.

CONCLUSIONS: Serum level of Cys C is markedly elevated and is positively correlated with Scr, uALB and LVMI in patients with TOD in elderly hypertension. It can be considered as an useful parameter for evaluating TOD in elderly hypertension.

P57
Effect of Rhizoma Alismatis Extracts on Oxidative Stress Induced by Cerebral Ischemia-reperfusion Injury in Rats

X. H. Wu, Z. X. Duan, X. X. Kuang, M. M. Xu, Z. J. Yu, F. Deng, Department of Traditional Chinese Medicine, the Second Affiliated Hospital University of South China, Hengyang 421001, China

BACKGROUND: Rhizoma Alismatis extracts has potentially clinical efficacy. In our study, we aimed to investigate the effects of Rhizoma Alismatis extracts on oxidative stress induced by cerebral ischemia-reperfusion injury in rats, and to explore its protective mechanism in cerebral ischemia-reperfusion injury.

METHODS: A total of 60 male SD rats were randomly divided into sham operation group, control group, Alisma orientalis group and Nimodipine positive control group (n=15, each). Cerebral ischemia-reperfusion injury model was prepared by suture method after 14 days of intragastric administration. After 24 hours, scores of neurological dysfunction, the infarct size, the water content of the brain, the malondialdehyde (MDA), superoxide dismutase (SOD), nitric oxide (NO) levels in serum and brain tissues, and the activity of inducible NO synthase (iNOS) were detected.

RESULTS: As compared with the control group, Alisma orientalis group showed that the scores of neurological dysfunction, cerebral water content, cerebral infarction size, contents of MDA and NO, and the activity of iNOS were significantly reduced, and the activity of SOD was significantly increased (2.21±0.38) vs. (2.78± 0.43), (81.18±2.09)% vs. (88.33±4.15 ) %, (0.26±0.07%) % vs. (0.35±0.04)%, (5.92±1.64) umol/L vs. (8.21±1.47) umol/L, (115.48±18.65) mU/L vs. (75.52±20.78) mU/L, (28.23±4.32) umol/L vs. (41.73±3.85) umol/L, (15.31±1.68) mU/L vs. (23.49±3.53) mU/L, (5.41±0.68) umol/L vs. (7.58±1.49) umol/L, (168.57±10.65) mU/L vs. (150.11±13.62) mU/L, (14.37±0.77) umol/L vs. (22.08±1.57) umol/L, (9.83±0.75) mU/L vs. (13.28±1.84) mU/L, respectively, all P<0.05. 
CONCLUSIONS: Alisma orientalis extract has the protective effect on focal cerebral ischemia-reperfusion injury, and the mechanism may be related to antioxidant and scavenging free radicals.

P58
Role and Mechanism of TGF-β1/smad3 Signal Pathways in Apoptosis in the Pathogenesis of Pulmonary Fibrosis in Mice

Q. Bai, X.J. Liu, Z. Qin, Y.F. Du, L. Qian, X.Y. Hao, Department of Geriatrics, the First Affiliated Hospital of Shanxi Medical University, Taiyuan 030001, China

BACKGROUND: TGF-β1 plays an important role in pulmonary fibrosis via activating effector molecule smad2 and smad3. The study aimed to explore the effect and mechanism of TGF beta1/smads signaling pathways on apoptosis in mouse pulmonary fibrosis.

METHODS: Fifty-four healthy male C57BL/6 mice were randomly divided into groups of control (N, n=18), pulmonary fibrosis model (M, n=18) and TGF-β1/smads inhibitor intervention (SB, n=18). The model and intervention groups were established via intratracheal injection of bleomycin (BLM), while normal saline was administered in the control group on day 1. Intervention group was intraperitoneal injected with SB431542 on days 3, 4 and 5 (4.2 mg/kg), while control and model groups were treated with normal saline in the same way. Six mice in each group were randomly sacrificed on days 7, 14 and 28. Haematoxylin-eosin and Masson staining were adopted to evaluate the severity of pulmonary inflammation and fibrosis. The content of hydroxyproline (Hyp) in the lung tissues was detected by alkaline hydrolysis technique. The apoptosis was observed by tunnel apoptosis assay kit. P-smad3 and caspase3 protein expressions were assessed via Western blot.

RESULTS: The lungs in model mice developed alveolar inflammatory change in 7 days, developed to pulmonary fibrosis significantly in 28 days (P <0.05), additionally, apoptosis index, Hydroxyproline content, caspase3, p-smad3 were obviously higher than those of control group (P <0.05). Compared with model group, alveolitis and pulmonary fibrosis degree, hydroxyproline content, cell apoptosis index, the expressions of p-smad3 and caspase3 in SB group were decreased in intervention group at same point in time (P <0.05).

CONCLUSIONS: TGF-β1/smads signaling pathways may participate in the abnormal apoptosis during the development of pulmonary fibrosis, and SB431542 could inhibit this process.

P59
Serum Levels of Inflammatory Cytokines and Oxidative Stress State in Patients with Amnestic Mild Cognitive Impairment

X. Gao, C.B. Duan, L. Bao, H.Y. Yu, F.K. Gao, R.M. Qi, B. Qin, Beijing Institute of Geriatrics, Beijing Hospital, Beijing 100730, China

BACKGROUND: Inflammatory reaction and oxidative stress are associated with amnestic mild cognitive impairment (aMCI). In our study, we aimed to evaluate changes in serum levels of high sensitivity C-reactive protein (hs-CRP), superoxide dismutase (SOD), glutathione peroxidase (GSH-Px) and malondialdehyde (MDA) in patients with aMCI.
METHODS: Using case-control study design, 68 aMCI patients (aMCI group) and 56 normal elderly (control group) from community were recruited. The blood serum levels of hs-CRP, SOD, GSH-Px and MDA were analyzed.

RESULTS: Compared with the control group, the hs-CRP level of aMCI group was increased significantly [(3.57±3.75) mg/L vs. (2.33±2.03) mg/L, t=2.337, P=0.021]. There were no significant difference in the levels of SOD ((26.88±6.34) ×10^3 U/L vs. (28.27±6.79) ×10^3 U/L, t=2.337, P=0.021), MDA ((9.12±4.51) μmol/L vs. (8.07±2.74) μmol/L, t=2.337, P=0.021) and GSH-Px ((175.08±41.66) unit of enzyme activity vs. (177.84±47.80) unit of enzyme activity, t=2.337, P=0.021) between aMCI and control groups.

CONCLUSIONS: The level change of hs-CRP in plasma suggests that inflammation reaction may play an important role in the pathogenesis of aMCI.

P60

Association of Serum 25-hydroxyvitamin D Levels with Aterial Stiffness, Left Ventricular Hypertrophy and High-sensitivity C-reactive Protein in Elderly Hypertension Patients

J. Ye, L.N. Zhao, J. Chang, Y.P. Hou, C.Y. Gao, Y.L. Chen, Department of Geriatrics, Beijing Chaoyang Hospital, Capital Medical University, Beijing 100020, China

BACKGROUND: 25 - hydroxyl vitamin D level is associated with hypertension. In our study, we aimed to examine the association of serum 25-hydroxyvitamin D levels with arterial stiffness, left ventricular hypertrophy (LVH), and high-sensitivity C-reactive protein (hs-CRP) levels in elderly hypertension patients.

METHODS: 166 elderly patients [mean age: (80.8±6.2) years] with primary hypertension were recruited. Arterial stiffness was assessed by carotid femoral pulse wave velocity (cfPWV). Left ventricular mass index (LVMI) was determined according to the Devereux formula. High sensitive C-reactive protein (hs-CRP) levels were measured by an immunoturbidimetric assay. Serum levels of 25-hydroxyvitamin D were detected by an electrochemiluminescence method. Based on serum 25-hydroxyvitamin D levels, the patients were divided into two groups, the low 25-hydroxyvitamin D group (<20ng/ml) and the high 25-hydroxyvitamin D group (≥20ng/ml).

RESULTS: Faster cfPWV, higher hs-CRP levels and larger LVMI values were observed in the low 25-hydroxyvitamin D group as compared with the high 25-hydroxyvitamin D group [(15.00±3.04) m/s vs. (11.26±3.09) m/s; (0.47±0.71)mg/L vs. (0.32±0.52) mg/L; (120.14±25.82) g/m² vs. (96.74±23.10) g/m²; t=-6.79, -2.61, -5.16, respectively; P<0.001 or 0.05]. Multiple liner regression analysis showed that the 25-hydroxyvitamin D level was independently associated with LVMI (β=-0.209, P<0.001) and cfPWV (β=-0.406, P < 0.001) after adjustment for age, sex, parathyroid hormone levels. Low 25-hydroxyvitamin D was an independent risk factor for increased high sensitivity-C reactive protein levels (β=-0.117, P< 0.05). However, after adjustment for parathyroid hormone levels, 25-hydroxyvitamin D levels had no significant association with high-sensitivity-C reactive protein levels (β=-0.104, P>0.05).

CONCLUSIONS: Serum 25-hydroxyvitamin D is independently associated with arterial stiffness, LVH and inflammatory reactions. Vitamin D may play an important role in the pathogenesis of arterial stiffness and LVH in elderly hypertension patients.
P61
Utilization of Frailty Index in Prognostic Evaluation in Older Adults Living in Beijing

L. Zhang, Z. Tang, L.J. Diao, F. Sun, J.P. Wang, Departments of Epidemiology and Social Medicine, Xuanwu Hospital, Capital University of Medical Science, Beijing 100053, China

BACKGROUND: More attention has been paid to frailty index as a comprehensive geriatric assessment. This study aimed to explore the application of related parameters in Frailty Index, and to use this method to evaluate the prognosis of respondents.

METHODS: Evaluations based on the utilization of Frailty Index was performed in a cohort of 1808 elderly people aged 60 and above who dwelled in Beijing, including urban and rural area. And the baseline of this survey started from 2004, and the follow-up procedure was performed in the range of three, five and eight years. The mortality rate of all individuals was collected and analyzed.

RESULTS: Frailly Index and the age of individuals shared the same trend, that is as the age increasing, higher Frailly Index was expected ($r=0.314$, $0.395$, $0.405$, $0.319$, $P=0.004$, $0.000$, $0.000$, $0.000$). Respondents among the same level of Frailty Index differed according to several factors, and males, rural dwellers, and elderly people resulted in a higher death rate than females, urban dwellers and comparatively young individuals.

CONCLUSIONS: The Frailty Index may be a significant tool for evaluation of prognosis among elderly people.

P62
Analysis of Putative Risk Factors for Parkinson’s disease in 91 Patients in Shanxi: a Case-control Study

X. Bai, F. Y. Hu, Department of Neurology, Shanxi Provincial People’s Hospital, Taiyuan 030012, China

BACKGROUND: Parkinson’s disease is common in older adults. In our study, we aim to estimate the putative risks factors for Parkinson’s disease (PD), and to provide clues to its etiology and prevention.

METHODS: A 1:4 matched case-control study including 91 cases of PD and 364 controls was carried out in Shanxi Provincial People’s Hospital. Each subject completed an interviewer-administered questionnaire about some putative risks factors. Multivariable conditional logistic regression model was used to analyze the associated factors for PD. SAS 8.0 was used to analyze the data.

RESULTS: 6 risk factors were found significantly associated with PD. The odds ratio (OR) for family history of Parkinson’s disease was 5.421 (95%CI: 1.272-23.103), for rural living for more than 10 years was 3.330 (95%CI: 1.268-8.741), for mother maternal smoking was 1.607 (95%CI: 1.224-2.112), for mother matenal age over 37 years was 2.495 (95%CI: 1.044-5.961), for history of drinking alcohol was 3.673 (95%CI: 1.766-7.643), for less body exercising was 2.147 (95%CI: 1.279-3.602).

CONCLUSIONS: PD is a disease affected by the interaction of genetic and environmental factors, and the risk factors should be intervened selectively.
P63
Research on Life Quality and Influencing Factors for Empty Nester Elderly in Rural Area in Hunan

W. T. Zha, X. W. Yang, X. Y. Zhang, W. J. Liang, Department of Preventive Medicine, Medical college of Hunan Normal University, Changsha, 410013, China

BACKGROUND: In our study, we aimed to explore the life quality and influencing factors for empty nester elderly in rural area in Hunan, and to provide the scientific basis for effective interventions.

METHODS: The two villages of Yiyang and Huaihua were randomly selected by cluster sampling from June 2011 to December 2011 in Hunan. Data of the world health organization's quality of life instrument – short version (WHOQOL-BREF) was collected by face to face interview with the empty nesters. The risk factors for the quality of life in empty nester elderly in rural areas were analyzed by the multiple linear regression analysis.

RESULTS: A total of 785 valid questionnaires were acquired, among which 472 cases were from empty nester elderly (60.1%, 472/785), the average age of them was (69.3±7.3), and the sex ratio was 1.1:1 (male:female: 250:222). 81.8% of empty nester elderly were under junior middle school, 69.7% of them were married still living with spouse, 74.4% of them were farmers, 75.2% of them had monthly income under 500 Yuan, 56.4% of them got the income from their own labor, 69.9% of them considered that their relationship with children were harmony. 64.2% of empty nester elderly in village suffered from chronic diseases and 16.7% of them suffered from accidental injury within the last one year. The scores in physiological health, psychological health and quality of life were lower in empty nester elderly than in the non-empty nester elderly [(60.8±15.7) vs. (63.1±13.5), (59.0±12.1) vs. (64.6±17.4), (59.5±9.8) vs. (63.0±10.1), t=3.18, 4.43, 4.91, all P<0.05]. The multiple linear regression analysis showed that the influencing factors for life quality in empty nester elderly were education background, marital status, source of finance, relationship with children, chronic disease and accidental injury within the last one year (β=1.693, 2.426, 0.779, 1.060, -7.007, -3.784, all P<0.05).

CONCLUSIONS: The empty nest elderly account more than half of the elderly in rural area, who have the lower levels in physiological health, psychological health and quality of life. We should improve the awareness and knowledge of health in empty nester elderly, build their harmonious relationship with spouse and children, improve the social security and medical insurance system, actively promote the knowledge of chronic disease and accidental injury, in order to improve the quality of life in empty nester elderly and achieve the healthy aging.

P64
Cellular Senescence by Human Cytomegalovirus (CMV) Infection in Human Fibroblasts and Protective Effect from Resveratrol

G.X. Mao1*, H.FlLi2, J.B.Margolick3, G.F.Wang1, S.X.Leng2, Department of Geriatrics, Zhejiang Hospital, Zhejiang Provincial Key Laboratory of Geriatrics Research, Hangzhou, China1; The Johns Hopkins University School of Medicine2 and Bloomberg School of Public Health3, Baltimore, MD, USA

BACKGROUND: Chronic CMV infection is increasingly recognized to play an important role in the
pathogenesis of immunosenescence and age-related chronic conditions in older adults. However, the role of CMV infection in cellular senescence and availability of protective agents have not been adequately investigated.

**OBJECTIVE:** To test the hypotheses that (1) CMV infection causes cellular senescence in human fibroblasts, and (2) Resveratrol suppresses CMV infection and thus protects against cellular senescence.

**METHODS:** Human fibroblast cell line WI38 young cells (PD=30) in culture were infected with CMV Towne strain at low dose (MOI=0.01). Resveratrol was added to the culture at 20μM to assess its effects on CMV infection and cellular senescence. Cellular senescence was assessed by SA-β-gal staining. CMV replication was assessed by qPCR and immediate early (IE) protein expression by Western blot.

**RESULTS:** As shown in Fig. 1, CMV infection caused senescent phenotype in young WI38 cells demonstrated by positive SA-β-gal staining and resveratrol prevented such phenotype despite of CMV in the culture. Fig. 2 shows almost complete inhibition of expression of CMV IE proteins by resveratrol at 24, 48, and 72 hrs post-infection. Moreover, resveratrol achieved over 90% inhibition of CMV replication by qPCR.

**CONCLUSIONS:** CMV infection causes cellular senescence in human fibroblasts. Resveratrol prevented CMV-induced senescent phenotype likely by suppressing CMV replication and IE protein expression.

P65
Medicare Part D Medication Therapy Management Program: Promises and Pitfalls

Amy L. Ai, PhD, Florida State University, 2313 University Center Building-C, Tallahassee, FL 32306, amyai8@gmail.com

Medicare Part D provides outpatient prescription drug insurance to older and disabled adult beneficiaries. Medication Therapy Management(MTM) is a mandated component of the Medicare Part D drug benefit program implemented to help patients with multiple chronic conditions, high drug
costs, and high utilization improve the effectiveness and safety of their medication treatment. In 2006, the US Center for Medicare & Medicaid Services incorporated a MTM Program (MTMP) requirement for individuals with Part D coverage to ensure that drug regimens provide optimal therapeutic outcomes. On March 23, 2010, President Obama signed the Patient Protection and Affordable Care Act (PPACA) into law, followed on March 30th by the Health Care and Education Reconciliation Act of 2010. The PPACA authorizes expanded roles for pharmacists in the reformed health care model to ensure the appropriate use of medications. The law provides grants to establish community-based, multidisciplinary teams to support inclusion of pharmacist-delivered MTMP primary care practice. These grant programs will support the delivery of pharmacist-provided MTMSP for the treatment of chronic disease based on the “core elements” of the MTM model. Evidence shows that Part D has improved medication affordability and accessibility. Nonetheless, it remains unclear whether Part-D MTM has optimized health outcomes, increased the quality of medication use, and reduced clinical risk. Part D is undergoing its first major revision with the gradual elimination of the coverage gap by 2020. It is, therefore, timely to review the emerging evidence on the impact of Part D and MTMP to help inform future directions. This systematic review study of the current literature distills the evidence from rigorous studies for the impact of MTMP on economic, clinical and humanistic outcomes. Evidence in our aggregated data suggests that there is the potential promise of MTMP, especially in clinical outcomes, yet with mixed findings in economic outcomes and other gaps.

Acknowledgement: This study was completed in preparation for deliverables required through a contract with the Agency for Health Care Administration (AHCA). The opinion expressed in this article does not necessarily reflect the views of this organization.

P66
An Evaluation of the Cognition of Persons with Dementia after Interaction with Natural Elements

Susan Webster, The University of North Carolina at Greensboro, U.S.A

Research regarding the built environment and persons with dementia (PwD) typically explore techniques that allow buildings and furnishings to compensate for declining cognitive abilities of users. This study explores the environment's potential to stabilize or improve cognitive function.

Attention Restoration Theory (ART) asserts that interactions with nature contribute to concentration, resulting in improved cognitive performance. This theory has been documented with multiple populations, however systematic studies with PwD using natural elements in the context of the built environment and measures of cognition is deficient. This study investigates the effects of natural elements – operationalized by live plants – on the cognitive and behavioral responses of persons who have moderate to moderately severe dementia. Researchers assess the ability of PwD to perform multiple tests (Time and Change, Trail-making, and a portion of the Montreal Cognitive Assessment) at numerous data points, including prior to the installation of the intervention variable (plants), two days after the installation, and at several data points afterward.

This paper discusses the results of PwD interacting with natural elements and the implications for ART to assist designers and architects when considering environments as therapeutic tools.

By attending this session participants will gain an awareness of the effects of the built environment on PwD and learn strategies for creating environments that function as therapeutic tools.
P67
THE Orthogeriatrics Model: Testing the Effectiveness of an Integrated Model of Care in Older Patients with Femur Fracture

GUSTAVO DUQUE, MD, PhD, FRACP, Professor of Medicine, Head, Division of Geriatric Medicine, Department of Medicine & Director, Musculoskeletal Ageing Research Program, Sydney Medical School Nepean, the University of Sydney, Level 5, South Block, Nepean Hospital, Penrith, NSW, 2751, Australia

OBJECTIVES: At the end of this session the participants will be able to:

- Understand the principles of the orthogeriatrics model of care
- Improve their clinical practice by learning the most important aspects of treating older persons after a hip fracture
- Treat the pre- and post-operative periods in hip fracture patients, prevent the most common complications and develop interventions to prevent further falls and fractures in this population

BACKGROUND: Older adults with hip fracture have a 5- to 8-fold increased risk for all-cause mortality and much higher risk of institutionalization. Therefore, standardized and evidence-based interventions are highly needed. In this study, we aimed to assess the effectiveness of an integrated model of orthogeriatrics care.

METHODS: Two geriatricians run the program with the assistance of a multidisciplinary team. Assessment includes surgical risk, physical examination, nutrition, cognition, and blood tests. A comprehensive intervention plan was designed following the guidelines from the NSW Agency of Clinical Innovation. Two populations of neck of femur (NOF) fracture patients admitted prior (2006) and after (Jan. 2011-June 2012) the implementation of the program were compared.

RESULTS: Two groups of NOF fracture patients were compared: n=270 in 2006, and n=150 in 2011-12. Mean age (83±7) and gender (73% female) were similar in both groups. The orthogeriatrics group showed a significantly shorter delay in surgery (from 59.7% to 21.6%, p<0.01), lower in-hospital mortality (5.4% vs. 1.9%, p<0.05) and lower rate of di novo admission to nursing homes (24% vs.17%, p<0.05), with a higher number of patients receiving rehabilitation at discharge in the orthogeriatrics group (50% vs. 61.5%, p<0.05).

CONCLUSION: Our data demonstrates the effectiveness of an evidence-based standardized orthogeriatrics program run by geriatricians together with a multidisciplinary team.

P68
Attitudes toward Living Arrangements among Older Adults in China

Guangya Liu, Duke Law School, USA

BACKGROUND: Extended family households are traditional living arrangements in China. However, studies show that the number of older adults who live alone or with only a spouse is increasing. On one hand, due to a lack of national social security system, the decline in extended family household raises concerns about old-age support. On the other hand, this trend may reflect changing filial norms and
growing acceptance of independent living arrangement in the context of rapid population aging, one-child policy, and westernization. The study investigates the predictors of whether the elders believe the best living arrangement for the elderly is alone or with spouse, living with adult children, or living in an elder care facility.

METHODS: Using data on adults aged 60 and older (n=4,506) from the 2011 survey of the Chinese Health and Retirement Longitudinal Study (CHARLS), I examine the patterns and predictors of attitudes toward living arrangements among older adults.

RESULTS: The findings indicate that a significant number of Chinese older adults are now open to the elder care facilities as the best living arrangement for the elderly. The results show that socioeconomic status, family characteristics, and health status are associated with their attitudes toward living arrangement. The older adults who are better off are likely to view living alone or with spouse as the best living arrangement than those who are worse off.

CONCLUSIONS: Those who have frequent contacts with and receive financial assistance are more likely to indicate positive attitudes toward living with children than those who do not. The older adults who lack family support are more likely to show positive attitudes toward living in an institution than their counterparts.

P69
Cognitive Aging Trajectories: Burdens of Disability, Hospitalizations and Nursing Home Admissions among Community-living Older Persons

Ling Han, H. Allore, T. Gill, Yale University Internal Medicine and Yale Program on Aging, New Haven CT, USA

OBJECTIVE: This study aimed to better understand the course of cognitive aging and its clinical and policy implications.

METHODS: We followed 754 community-living persons ≥70 years in the Yale Precipitating Events Project every 18 months for nine years with the Mini-Mental State Examination (MMSE). MMSE scores were analyzed using a group-based trajectory model adjusting for age, sex and education.

RESULTS: Five distinct trajectories were identified. About a third of the sample (Optimal aging) started with high MMSE scores and remained stable over nine years. The remaining participants demonstrated diverging paths of Minimal (prevalence 41%), Moderate (16%), Progressive (8%) and Rapid (3%) decline, respectively. Older age and limited education were associated with being on a declining trajectory (Odds ratios: 1.2 to16.1); while women were less likely to have Moderate decline (OR: 0.53). The Participants in the Optimal trajectory had the lowest incidence of disability in Activities of Daily Living (ADL) (75 per 1000 person-months (pm), 95% Confidence Intervals (CI): 60-95) and Instrumental ADL (492/1000 pm, CI: 453-535), hospitalizations (29/1000 pm, CI: 26-33), nursing home admissions (18/1000 pm, CI:12-27), and death (20/1000 pm, CI: 17-25).

CONCLUSIONS: Participants in the Rapid decline trajectory had the highest rates of ADL disability (612/1000 pm, CI:595-758) and death (57/1000 pm, CI: 36-89); while those in the Progressive decline trajectory had the highest rate of nursing home admissions (363/1000 pm, CI:292-451). Adjusting for depressive symptoms and chronic conditions or excluding participants with fewer than 3 assessments (n=64) did not.
P70
Using Research to Inform Long-Term Care: Evidence-Based Practice in Jindongfang

Margaret A. Perkinson¹, David D. Rockemann², and Min Cole¹, ¹University of Maryland Baltimore County; Quality of Life Group; ²Quality of Life Group; ³Quality of Life Group; North Texas University

BACKGROUND: Evidence-based practice (EBP) is an approach gaining wide acceptance in Western health and social services systems (Proctor 2007) and holds promise as a potentially useful approach for refining China’s public health system (Liang 2013) and informing the development of its long-term care (LTC) services and programs. EBP is an approach that uses relevant up-to-date research evidence to inform or guide practitioners in addressing client- and group-centered needs to provide optimal care in everyday practice. Recent debate over the transferability of evidence-based interventions to diverse cultural groups (Bernal 2006) has prompted growing interest in cultural adaptations to this approach (Chu, Huynh & Arean 2012).

METHODS: This presentation provides a case study documenting the process of using research evidence to inform the development of operations within a Chinese continuing care retirement community (CCRC). CCRCs are residential communities for older adults, offering a full continuum of care that combines independent living, assisted living, and nursing care within a single campus.

RESULTS: Our evidence base comes from our review of the recent research literature on CCRCs, from which we identify factors with greatest impact on CCRC residents’ health, functional status and quality of life. We will discuss the implications of these research findings for LTC in China in general and offer one specific example, Jindongfang, a new CCRC in Changzhou, Jiangsu Province, in which research-based guidelines are culturally adapted and used to inform the policies and procedures of its operations and management.

CONCLUSION: After attending the session, participants will be able to define evidence-based practice, understand how to adapt globally-based research evidence for specific Chinese contexts, and demonstrate how to use this evidence to inform the development of policies, procedures, programs and interventions for LTC facilities in China.

P71
Mainstreaming Gerontological Education in Nigeria – Finding a niche for Nigerian Universities.

Nu’uman Mohammed Habib, Department of Sociology, Bayero University Kano, Kano State, NIGERIA, nuuman2020@yahoo.com

Nigeria is the most populous country in Africa and ranks as the ninth in the world. Although at the present about 42 percent of Nigeria’s population is under 15 years of age, it is projected that by 2025 the population of Nigerians aged 60 and above will constitute 6 percent of the entire population. There is the potential for a rapid growth rate of the older population in coming years, with a lower growth rate among the younger population. In the coming years, the aging population is expected to increase in numbers and life expectancy rates will gradually increase with significant social and economic implications to the individuals and the Nigerian government. However, despite the social, economic, demographic and political consequences that such changes pose to the Nigerian state and institutions,
little has been done by way of preparations to respond to the challenges of an aging society and there was hardly any public discourse on aging in Nigeria. This paper examines the efforts of the National Universities Commission, NUC, which had begun to lay the foundation for mainstreaming gerontology into Nigeria’s higher education curriculum. In collaboration with the University of North Texas, the NUC selected and trained 22 Nigerian faculty drawn from eleven Nigerian universities - and two other staff of the commission - as seed faculty for the development of gerontology education and for the training of the key manpower that is required to handle aging issues as they arise in a professional and competent manner.

P72
Older Chinese Migrants in the UK: Employability, Retirement and Care for the Elderly

Matt Flynn¹, Louise Wong², Wai Yin², Mary Hartog², Chen Xi³, ¹Newcastle University; ²Middlesex University; ³XiBei University

This paper addresses a hitherto unexplored issue of the impact of rising pension ages on older migrants. The study, based on action research with a community group in Wai Yin, showed that while Chinese migrants face considerable barriers to work, there is an interest in work providing care to elderly Chinese so long as a system of reciprocity exists such that they can be assured equivalent care when needed.

In the UK, as in most parts of Europe, government is seeking to increase real retirement ages by raising pension ages, restricting social benefits, and encouraging employers to provide work opportunities for older workers. This agenda presents three major challenges for the Chinese community, particularly first generation Cantonese. First, many within the community are employed in the catering sector in physically demanding and stressful work, where the expectation is for very early retirement (before 55 years). Second, a large proportion have spent most of their careers self-employed, usually owning and running family businesses. Consequently, they cannot rely on employers to provide access to retraining, flexible working, and phased retirement which could help workers delay retirement. Third, first generation Chinese often lack sufficient English skills either to find re-employment or participate in government-sponsored training.

As part of a collaborative project, Wai-Yin, a community centered organization in Manchester, and the Centre for Research into the Older Workforce collaborated on an action research-based project to learn what kind of work opportunities would persuade older Chinese nationals to delay retirement; what obstacles they face in gaining employment; and specifically the support which they would need to pursue second careers in care giving. In this paper, we discuss our findings and what recommendations older Chinese themselves come up with for supporting extended working life within their community.

P73
Emerging Trends in US Long-Term Care Services: The Experience of Oregon

Walt Dawson

Research and Analytics, Oregon Health Care Association, 11740 SW 68th Pkwy # 250, Portland, OR 97223, Email: wdawson@ohca.com
Oregon stands at the forefront of a national shift toward the widespread use of community based care (CBC) options such as assisted living, residential care, and adult foster homes to provide long-term care services. At the same time, sacrificed nursing facilities (SNFs) increasingly serve as transitional centers of post-acute rehabilitative care. While the move toward CBC is well-documented and celebrated, the evolving SNF marketplace has received considerably less attention.

Ten years of Oregon data show that total annual admissions to SNFs have increased across all payer sources, while the total number of resident days and average length of stay have both declined. A decreasing length of stay is most prevalent amongst individuals who receive services through the publicly funded program of Medicaid; however, it is also evident within private pay SNF admissions. These data provide evidence of a well-established movement in Oregon, but also point to an emerging trend in the long-term care services marketplace of other US states driven by rising care costs, evolving public policies, and shifting public attitudes toward the delivery of care in old age.

At the end of the session, attendees will be able to demonstrate a solid grasp of the long-term care services system in the United States with a particular focus on the experience of the state of Oregon. Attendees should also be able to identify major demographic, socio-economic, and health status trends amongst the populations served in different types of long-term care settings. Lastly, attendees should demonstrate knowledge of the costs associated with the provision of services by care setting in the United States and Oregon and how these trends may be used to better understand the care needs of China’s rapidly aging population.

P74
Identifying Information Management challenges during Older Adults’ Transitions from Hospital to Home Care

Arbaje Al1, Werner NE1, Nasarwanji M2, Gurses AP2, Leff B1, 1Department of Geriatrics and Gerontology, 2Armstrong Institute for Patient Safety, The Johns Hopkins University School of Medicine, Baltimore, United States

BACKGROUND: Older adults requiring skilled home healthcare (SHHC) services (e.g., home nursing or physical therapy) after hospital discharge are at risk for experiencing suboptimal care transitions. SHHC professionals (SHHCP) execute hospital/SHHC transitions, yet little is known about the information management and workflow challenges they face.

OBJECTIVE: To identify (1) critical tasks in SHHCP workflow during hospital/SHHC transitions, and (2) the resulting information management challenges

METHODS: Qualitative ethnographic methods were used to observe and interview 15 SHHCP, 22 older adults, and their 22 caregivers. Methods were guided by the Systems Engineering Initiative for Patient Safety model (SEIPS). Participants came from 9 medical and surgical units, a skilled nursing facility, and one SHHC agency. Data collection took place at multi-disciplinary rounds, the bedside, home visits, and during SHHCP office work

RESULTS: SHHCP workflow was characterized by a high reliance on other individuals and complicated information management systems. Challenges related to information management were substantial: (1) acquiring information from multiple sources (e.g., people and computer systems); (2) identifying and communicating with primary care providers; (3) managing communication breakdowns after hospital discharge; and (4) delivering care with incomplete information.
CONCLUSIONS: Information management challenges are potential risks to older adults’ safety during hospital or SHHC transitions. Understanding information management challenges can guide the development of interventions to identify processes that put patients at risk for suboptimal hospital/SHHC transitions.

P75
Learning from Lawsuits: Application of a Human Factors Engineering Approach to Investigate Hospital-to-Home Care Transitions using Malpractice Data

Arbaje AI,1 Werner NE,1 Nasarwanji M,2 Gurses AP,2 Leff B.1 Department of Geriatrics and Gerontology,1 Armstrong Institute for Patient Safety,2 The Johns Hopkins University School of Medicine, Baltimore, United States

BACKGROUND: Malpractice claims are an important and underutilized data source to understand care transitions from the hospital to home.

OBJECTIVE: To leverage malpractice claims data to (1) develop a conceptual model based on a Human Factors Engineering (HFE) approach to evaluate risks during patients’ care transitions and (2) leverage this model to develop and test a discharge planning tool.

METHODS: Claims summaries of closed malpractice claim files from 2000-2009 were obtained. A multi-disciplinary team developed a case definition and nine experts reviewed the claims for relevance to care transitions. We used grounded theory to generate themes from the cases, and to modify the HFE conceptual model. Stakeholders created two discharge planning tools during structured focus groups in which they prioritized themes from the model – one for patients/caregivers and one for care providers. Both tools were feasibility tested on 53 patient discharges from an inpatient general medical nursing unit.

RESULTS: Of the 230 claims, 5.7% were related to suboptimal care transitions. Qualitative analysis yielded 41 measures grouped into 19 categories corresponding to the conceptual model. Providers reported the tools were easy to use and did not adversely affect workflow. Patients reported the tool was acceptable in length and response burden. The primary concern was that often, patients/caregivers were still waiting for information when they received the survey.

CONCLUSIONS: The application of an HFE approach using malpractice claims, conceptual model, and elements from the discharge planning tools can be used to complement other approaches to characterize systems failures threatening patient safety.

P76
The Protective Effects of KBD on Antioxidant Enzyme in H₂O₂-induced Oxidative Damage of PC12 Cells

Y. H1, S. F. Ye2, T. T. Wang3, Y. Y. Su3, H. J. Wang3, L. N. Wu3, J. Cai2,1 The Second People’s Hospital Health Management of Fujian Province, Fuzhou 350003, China; 2 Academy of Integrative Medicine, Fujian University of Traditional Chinese Medicine, Fuzhou 350122, China; 3 College of Integrative Medicine, Fujian University of Traditional Chinese Medicine, Fuzhou 350122, China

The project was supported by the Key Foundation of Society Development in Fujian Province, No.
OBJECTIVE: To observe the protective effect of kidney-reinforcing and blood-activating decoction (KBD) on \( \text{H}_2\text{O}_2 \)-induced oxidative damage of PC12 cells.

METHODS: Using \( \text{H}_2\text{O}_2 \)-induced damage to establish the vitro model of oxidative damage of the nerve cells, cell viability was determined by MTT. Cell ultrastructure was observed by electron microscope, and the content of SOR and the activity of antioxidant enzyme, such as CAT, GPx-1 and GSH was detected with ELISA kit. The protein expressions of HO-1, CAT, GPx-1, Caspase 3 were detected by Western blot, and the mRNA expressions of HO-1, CAT, GPx-1 were detected by RT-PCR.

RESULTS: \( \text{H}_2\text{O}_2 \)-reduced cell viability of PC12 cells, changed cell morphology, and increased SOR content but decreased the activity of CAT, GSH, GPx-1. It down-regulated the protein, mRNA expressions of HO-1, CAT, GPx-1 while up-regulated protein expression of Caspase3. Differences are statistically significant \((P<0.05)\). The water extract and alcohol extract of KBD significantly improved cells viability \((F=21.125, P<.01)\); maintained normal cell morphology, decreased SOR content \((F=3.331, P<.05)\) but increased the activity of CAT \((F=40.134, P<.01)\), GSH \((F=21.182, P<.01)\), GPx-1 \((F=6.456, P<.01)\), up-regulated the protein, and mRNA expressions of HO-1, CAT, GPx-1, however, down-regulated protein expression of Caspase 3. Differences are statistically significant \((P<0.05)\).

CONCLUSION: KBD can ameliorate \( \text{H}_2\text{O}_2 \)-induced oxidative damage of PC12 cells by improving the activity of intracellular antioxidant enzyme.

P77
Risk Factors Associated with Geriatric Depression Based on Comprehensive Geriatric Assessment in Chongqing Area in China

Y. Cao 1, W. Zhang 2, Y. T. Deng 1, J. X. Duan 1, M. Zhang 1, Q. Tu 1, W. X. Yang 3, W. H. Yu 3, Y. Lü 1,
1Department of Geriatrics, the First Affiliated Hospital of Chongqing Medical University, Chongqing 400016, China; 2Departments of Epidemiology and Biostatistics, West China School of Public Health, Sichuan University, Chengdu 610041, China; 3Institute of Neuroscience, Chongqing Medical University, Chongqing 400016, China

BACKGROUND: Depression in the elderly is often caused by multifactor, and it is still necessary to study depression-associated risk factors in different population. The present study aimed to investigate risk factors associated with depression in the elderly population in Chongqing, China.

METHODS: We enrolled a total of 615 participants aged 60 years or older. Depressive symptoms were evaluated by using the 30-item Geriatric Depression Scale. Risk factors associated with depression were also evaluated, including age, education, and marital status, profession, family pattern, income, chronic diseases, disability, self-reported health, smoking, alcohol, exercise, insomnia, work time, activity, and medical expenses.

RESULTS: 152 (24.72%) participants suffered from depressive symptoms. Marriage \((\text{OR}=0.8600, 95\% \text{ CI} 0.7390-1.000)\), self-reported health \((\text{OR}=0.4430, 95\% \text{ CI} 0.3310 -0.5940)\), disability \((\text{OR}=0.5910, 95\% \text{ CI} 0.3530-0.9900)\), exercise \((\text{OR}=0.6470, 95\% \text{ CI} 0.4980 -0.8420)\) and insomnia \((\text{OR}=0.5590, 95\% \text{ CI} 0.3500-0.8930)\) were statistically significant in the elderly with depressive
symptoms compared to those with non-depression (P<0.05), which were considered as main risk factors of geriatric depression in Chongqing.

**CONCLUSIONS:** Incidence of depression is high in Chinese old people. Risk factors of depression are mainly social support and life style associated. Evaluation of depressive risk factors is a vital strategy for preventing depression and taking interventions.

**P78**

**Study on Hemin Oxygenase (HO)-1/CO-bilirubin System in Elderly Patients with Congestive Heart Failure at Different Altitude**

A. Q. Xi, W. R. Zhao, B. X. Liao, X. Zhong, L. Shang, Geriatrics Department, Qinghai Provincial People’s Hospital, Xining, Qinghai 810007, China

**OBJECTIVE:** High altitude (HA) presents inhospitable environmental conditions that adversely affect human physiology and metabolism. Changes in pathophysiological functions are reported during high altitude exposure, and hypoxia can cause myocardial hypertrophy. However, few study have explored the effect of different altitude hypoxia (2260m, 3300-3500m) on hemin oxygenase (HO)-1/CO-bilirubin system in elderly patients (≥65 years old) with congestive heart failure. The aim of the present study was to evaluate the relationship between ventricular remodeling and changes of hemin oxygenase (HO)-1/CO-bilirubin system.

**METHODS:** CHF patients (n=56) from high altitude were studied and 69 CHF from moderate altitude (2260m) were enrolled as controls, and the serum levels of heme oxygenase - 1 (HO-1), carboxyhemoglobin (COHb) and cGMP were detected. Their LVMI and MWS were measured by echocardiography.

**RESULTS:** Compared with moderate altitude group, the serum levels of HO-1, COHb and cGMP were obviously increased in high altitude group [HO-1(127.8±12.8) vs (86.5±8.4) nmol/h.L; COHb (9.43±1.36%) vs (5.27±0.75%); cGMP (16.5±2.7) vs (9.7±1.6) PM/ml respectively]. Similarly, LVMI and MWS were significantly higher in high altitude group [(182.3±8.7) vs (98.4±5.3) g/m² and (453.8±15.7) vs (299.4±10.1) dynes x10⁵/cm², respectively]. There was a positive correlation between LVMI, MWS and the levels of HO-1, COHb and cGMP (all P<0.01). Hypoxia increased the changes of ventricular remodeling via the induction of HO-1, COHb and cGMP. With the increase of altitude, CHF patients had higher levels of HO-1, COHb and cGMP.

**CONCLUSION:** The results suggest that the changes of hemin oxygenase (HO)-1/CO-bilirubin system plays a role in pathophysiological and pathogenetic mechanism of ventricular remodeling in CHF from high altitude.

**P79**

**Correlation between PARK16 Gene Polymorphism Sites and Parkinson’s disease in Xinjiang Uygur and Han Nationality**

H. Xia, Q. Luo, X.L. Yang, Senior Cadre Ward, the Affiliated Tumor Hospital of Xinjiang Medical University
OBJECTIVE: To investigate the correlation between PARK16 gene rs947211, rs823144 polymorphisms and Parkinson's disease (PD) and the differences in genotypic and allelic frequencies between the Uygur and Han populations.

METHODS: A case-control study which included 441 PD patients (260 cases of Han and 181 cases of Uygur) and 495 controls (287 controls of Han and 208 controls of Uygur) was performed. The genotypes and allele genotypes of PARK16 gene rs947211, rs823144 polymorphism sites was analyzed by the methods of polymerase chain reaction (PCR-RFLP) and was verified the results by using the DNA sequencing method.

RESULTS: (1) For rs947211, a statistically significant difference was observed between the case group and the control of Han in genotypic and allelic frequencies \( (\chi^2 = 8.931, P = 0.011 \text{ and } \chi^2 = 7.865, P = 0.005) \). Individuals who carried G allele had more risk than the non-carrier \( (OR = 1.407, 95\% CI: 1.108-1.788) \); There was also a statistically significant difference of genotypic and allelic frequencies in Uygur case group compared with the Uygur control group \( (\chi^2 = 8.100, P = 0.017 \text{ and } \chi^2 = 7.117, P = 0.008) \). The Uygur case group that carried G allele had more risk than the controls had \( (OR = 1.471, 95\% CI: 1.107-1.955) \). However, there was no statistically significant difference of genotypic and allelic frequencies in Han case group compared with the Uygur case group \( (\chi^2 = 0.053, P = 0.974 \text{ and } \chi^2 = 0.013, P = 0.911) \). (2) For rs823144, there were no statistically significant differences of genotypic and allelic frequencies in Han case group compared with the Han control group.

CONCLUSION: The results suggest that rs947211 polymorphism of PARK16 gene is associated with PD in the Uygur and Han populations. The G allele might be an independent risk factor and genetic marker for PD. However, there is no significant difference between Uygur with PD and Han with PD. There was no correlation between rs823144 polymorphisms and PD.

P80
Study on the Changes in Levels of HMGB1, TNF-α, IL-6, Ang II and Their Relationships with Cardiac Function in Elderly Anemic Patients with Congestive Heart Failure

A. Q. Xi, X. Zhong, B. X. Liao, Y. L. Li, L. Shang, People's Hospital of Qinghai Province, Xining 810007, China

OBJECTIVE: To study the changes of serum high mobility group box 1 protein (HMGB1), tumor necrosis factor-α (TNF-α), interleukin-6 (IL-6), Angiotensin II (Ang II) and their relationships with cardiac function in elderly anemic patients with congestive heart failure (CHF).

METHODS: A total of 121 consecutive elderly patients with CHF and 27 healthy subjects with matched age and sex were enrolled, and CHF patients were divided into Anemic group (n= 45) and non-anemic group (n= 76) according to Hb concentrations. Serum levels of HMGB1, TNF-α, IL-6, Ang II were measured by ELISE, and left ventricular ejection fraction (LVEF) was detected by Doppler ultrasound imaging.

RESULTS: LVEF and Hb concentration in patients with CHF were lower than that in healthy subjects \( (38.99±11.56)\% \text{ vs } (68.73±7.05)\% \), \( (131.25±31.87) \text{ g/l vs } (162.41±7.68) \text{ g/l} \), and the levels of HMGB1, TNF-α, IL-6, Ang II were on the contrary \( (82.42±42.13) \text{ ng/L vs } (25.26±5.23) \text{ ng/L}, (134.95 ±60.7) \text{ ug/L vs } (41.18 ±4.12) \text{ ug/L}, (127.57±87.16) \text{ pg/ml vs } (9.52±1.82) \text{ pg/ml} \).
The levels of HMGB1, TNF-α, IL-6, Ang II had higher values in the anemic patients with CHF compared with patients without anemia (37.65±5.34 pg/ml vs (19.83±2.91) pg/ml, 92.33±6.39) ng/L vs (55.63±10.16) ng/L, (145.22±13.53) ug/L vs (106.5±20.36) ug/L, (144.53±64.12) pg/ml vs (76.69±48.49) pg/ml, all p<0.01). LVEF were on the contrary (33.94±5.23)% vs (45.35±8.82)% p<0.01). There were negative correlation between Hb concentration and the levels of HMGB1, TNF-α, IL-6, Ang II (r= -0.8091, -0.8509, -0.6548, -0.8173, all p<0.01), and LVEF was positively correlated with Hb concentration (r=0.6813, p<0.01).

CONCLUSION: The serum levels of HMGB1, TNF-α, IL-6 and Ang II were significantly elevated in anemic patients with CHF, which suggests that cytokines and neurohormonal activation may possibly participate in pathophysiological process of anemic development of CHF, and correlated with the severity of CHF.

P81
Study on the Relationship between Frailty Index of Elderly Patients with Coronary Heart Disease and Health Related Adverse Event ---- A Retrospective Study

J.H. Wu1, S.M. Zhang1, Y. Liu1, Y.C. Wu2, Y.X. Liu1, F. Luo1, B.R. Dong1, 1Department of Geriatric Medicine, West China Hospital of Sichuan University, Chengdu, 610041, China; 2Teaching Hospital of University of Massachusetts Medical School, Worcester, Massachusetts 01655, USA;

OBJECTIVE: Chinese aging population has led to an increase in the number of elderly patients with coronary heart disease. As survival rates improving, the research field of coronary heart disease has increasingly focused on health-related quality of life and long-term disability. But there is little research on the correlation between frailty level and adverse health-related outcomes among patients older than 70 years with coronary heart disease in China. In this study, we retrospectively examined the relationship between frailty index including physical, cognitive, and psychosocial criteria and disability and health-related quality of life (HRQL) in patients older than 70 years with coronary heart disease in one year.

METHODS: Data were obtained from the center of gerontology and geriatrics of West China Hospital. We selected all the patients with coronary heart disease older than 70 years from September 2012 to September 2013. Two hundred and twenty patients older than 70 years with coronary heart disease were surveyed with demographic characteristics, medications, balance, gait speed, cognition, self-reported health, body mass index (BMI), depressive symptoms, and activity of daily living (ADL), mini-mental state examination (MMSE), health-related quality of life (HRQL). And these data were compared with patients' results done one year ago.

RESULTS: Total sample size was 220 patients. There was statistical significance in age, number of chronic disease, depressive mood, MMSE, falls, ADL disability contributing to frailty (P < 0.05). Frail patients had a higher age-adjusted risk of cognitive function decline (OR, 4.15), disability (OR, 7.54), fall (OR, 8.75), and HRQL (OR, 6.33). There were statistical significance in age(OR=2.95), number of chronic disease(OR=1.87), depressive mood(OR=2.13), MMSE(OR=1.45), falls(OR=3.66), ADL disability(OR=2.28) contributing to frailty (P<.05) . Frail patients had a higher age-adjusted risk of cognitive function decline (OR=4.15), disability (OR=7.54), fall (OR=8.75), and HRQL (OR=6.33).

CONCLUSION: Frailty index including physical, cognitive, and psychosocial criteria has a closely relationship with increased disability and decreased HRQL in patients older than 70 years with coronary heart disease in one year. Further assessment for this index for elderly patients with coronary heart disease should be required by clinicians and researchers.
The Cause of Death of Aged Patients during the Past Seven Years in Hospital and Its Related Factors

J. Li, J. Kong, Q. Li, J.X. Jin, The First Affiliated Hospital of Jilin University, Jilin Chang Chun, 130021, China

OBJECTIVE: To study the cause of death and related factors of aged patients during the past seven years so as to provide clinical guideline for prevention, diagnosis and management.

METHODS: A retrospective study was conducted for this investigation in ranking the death causes in 713 aged patients (persons aged greater than or equal to 60 years) in our hospital.

RESULTS: The average death age was 82.30±12.5. It was observed that top three causes of death in aged patients in hospital were malignant tumors, respiratory diseases, cardiovascular and cerebrovascular diseases, which accounted for 90.18%. The main death cause for aged patients was malignant tumors, which was dominated by lung cancer, liver cancer and stomach cancer. Respiratory diseases (excluding lung cancer) and cardiovascular diseases ranked as the second and third leading causes of death respectively, which accounted for 28.89% and 16.13% of all the deaths. Pneumonia and coronary heart disease are the main cause of mortality related to respiratory diseases and cardiovascular diseases respectively, accounting for 66.50% and 72.17%. Cerebrovascular diseases ranked fourth, accounting for 11.78% of deaths in this group, represented by cerebral infarction (approximately 83.33%).

CONCLUSION: Malignant tumors, respiratory diseases, cardiovascular and cerebrovascular diseases were the top three leading causes of death in the aged respectively. Early diagnosis, early intervention and correct treatments are important measures to reduce the mortality for the three kinds of systemic diseases.

Meta Analysis of Efficacy of Antihypertensive Agents on Vascular Structure of Coronary Heart Disease

Y.J. Zhang¹, P.S. Wu², W.Z. Zhong¹, ¹ Department of Gerontology, General Hospital of Guangzhou Military Area Command, Guangzhou 510010 China; ² Department of Cardiology, NanFang Hospital of NaFang Medical University, Guangzhou 510515, China

OBJECTIVE: Our objective was to review literature and to evaluate the effects of antihypertensive drugs on the vascular structure of the patients with coronary heart disease.

METHODS: Systematic search of empirical studies was performed up to August 2013 in Pubmed, Cochrane Library, Ovid EMB Reviews, EMBASE, Chinese Biomedical Literature Database, Chinese Scientific Journal Full-text Database, and Chinese Journal Full-text Database based on the principles of evidence-based medicine, corresponding inclusion and exclusion criteria to identify randomized controlled trials (RCTs) comparing the changes of arterial plaque volume by IVUS of coronary heart disease patients. Two reviewers independently evaluated the quality of the included studies, extracted data with a unified form, and analyzed the data by Cochrane Collaboration’s RevMan 5.0 software. We performed the analysis of the effects of antihypertensive drugs on the vascular structure of coronary
heart disease patients, and meta-analysis was done using Cochrane Collaboration’s RevMan 5.0 software.

RESULTS: 9052 English articles and 10 Chinese articles are included. Three studies of RCTs involving 719 patients met the inclusion criteria. The results of meta-analysis suggested that there was an insignificant effect of antihypertensive drug treatment on arterial plaque volume in patients with coronary heart disease (MD = −0.70, 95% CI −1.70–0.30).

CONCLUSION: The results suggest that antihypertensive drugs likely reduce the arterial plaque volume in patients with coronary artery disease.

P84

The Effect of TPF Enteral Nutrition on Nutritional Status and Prognosis in Elderly Stroke Patients

J.H. Yu, W. Cha, H.J. Wang, X.L. Liu, X.F. Chen, Q.H. Yin, G.S. Ye, J. Wang, Y. Fang, S.N. Fu, No. 6 Hospital of ShaoXin, Zhejiang Province, China

OBJECTIVE: The aim of this study was to investigate the effects of TPF-enteral nutrition on nutritional status and prognosis in elderly patients with acute stroke.

METHODS: 94 cases of elderly stroke patients were randomly divided into TPF enteral nutrition group (TPF, 47 cases) and standard enteral nutrition group (TP, 47 cases). All patients were given EN support therapy in accordance with the heat with a BMI calculated all required to give. We measured the levels of blood glucose, hemoglobin, serum total protein, albumin, triglyceride, total cholesterol, high density lipoprotein, low-density lipoprotein and gastrointestinal side effects, and the infection and the incidence of gastrointestinal complications on days 7 and 21 after enteral nutrition, NIHSS on days 1 and 21.

RESULTS: The nutritional parameters and NIHSS had no difference before EN support. 7 days after enteral nutrition: (1) All the nutrition indicators except Glu were decreased in Standard EN group and the TPF group except Glu and TG; (2) The Hb, TG, TC, LDL of TPF EN group were higher than those of the standard EN group, and the difference was statistically significant (P <0.05); (3) The gastrointestinal complications and the incidence of infection in TPF EN group were lower than in the standard EN group, the difference in complications was statistically significant (P <0.05). 21 days after enteral nutrition: (1) The ALB of TPF EN group rebound, TG, HDL decreased, The TP, ALB, TC, HDL of standard EN group continued to decline, and the difference was statistically significant on 7 days of nutritional support (P <0.01); (2) The ALB, Hb, TG, TC, HDL, LDL of TPF EN group were higher than the standard EN group, and the difference was statistical significant (P <0.01); (3) The gastrointestinal complications and the incidence of infection of TPF EN group was significantly lower than the standard EN group, there was obvious statistical significant (P <0.05); (4) Both two groups’ NIHSS score had been improved significantly compared to the first day (P <0.01), and the TPF EN group improved the patient’s NIHSS score more significantly than the standard EN group (P <0.01).

Table 1: Nutrition—related indicationtions between the two groups (X ± s)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standard EN group</th>
<th>TPF EN group</th>
</tr>
</thead>
</table>

- Table1 Nutrition—related indicationtions between the two groups (X ± s)
### TP (g/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>69.83 ± 8.18</td>
<td>67.80 ± 7.30</td>
<td>63.04 ± 5.45</td>
<td>70.43 ± 8.23</td>
<td>65.49 ± 6.52</td>
<td>69.26 ± 7.22</td>
</tr>
<tr>
<td>70.43 ± 8.23</td>
<td>65.49 ± 6.52</td>
<td>69.26 ± 7.22</td>
<td>70.43 ± 8.23</td>
<td>65.49 ± 6.52</td>
<td>69.26 ± 7.22</td>
</tr>
</tbody>
</table>

### ALB (g/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.54 ± 4.52</td>
<td>33.41 ± 4.33</td>
<td>32.24 ± 3.29</td>
<td>38.06 ± 4.11</td>
<td>34.28 ± 4.62</td>
<td>36.89 ± 4.63*</td>
</tr>
<tr>
<td>38.06 ± 4.11</td>
<td>34.28 ± 4.62</td>
<td>36.89 ± 4.63*</td>
<td>38.06 ± 4.11</td>
<td>34.28 ± 4.62</td>
<td>36.89 ± 4.63*</td>
</tr>
</tbody>
</table>

### Hb (g/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>138.24 ± 20.45</td>
<td>122.86 ± 18.73</td>
<td>119.49 ± 19.56</td>
<td>137.56 ± 19.34</td>
<td>129.38 ± 18.29*</td>
<td>126.94 ± 17.35*</td>
</tr>
<tr>
<td>137.56 ± 19.34</td>
<td>129.38 ± 18.29*</td>
<td>126.94 ± 17.35*</td>
<td>137.56 ± 19.34</td>
<td>129.38 ± 18.29*</td>
<td>126.94 ± 17.35*</td>
</tr>
</tbody>
</table>

### TG (mmol/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.43 ± 0.24</td>
<td>1.25 ± 0.38</td>
<td>1.08 ± 0.32</td>
<td>1.44 ± 0.35</td>
<td>1.45 ± 0.41*</td>
<td>1.44 ± 0.32*</td>
</tr>
<tr>
<td>1.44 ± 0.35</td>
<td>1.45 ± 0.41*</td>
<td>1.44 ± 0.32*</td>
<td>1.44 ± 0.35</td>
<td>1.45 ± 0.41*</td>
<td>1.44 ± 0.32*</td>
</tr>
</tbody>
</table>

### TC (mmol/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.92 ± 0.85</td>
<td>4.66 ± 0.98</td>
<td>3.77 ± 1.21</td>
<td>4.95 ± 1.13</td>
<td>4.81 ± 0.95*</td>
<td>4.67 ± 0.72*</td>
</tr>
<tr>
<td>4.95 ± 1.13</td>
<td>4.81 ± 0.95*</td>
<td>4.67 ± 0.72*</td>
<td>4.95 ± 1.13</td>
<td>4.81 ± 0.95*</td>
<td>4.67 ± 0.72*</td>
</tr>
</tbody>
</table>

### HDL (mmol/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.01 ± 0.18</td>
<td>1.07 ± 0.20</td>
<td>1.01 ± 0.18</td>
<td>1.01 ± 0.18</td>
<td>1.07 ± 0.20</td>
<td>1.01 ± 0.18</td>
</tr>
<tr>
<td>1.01 ± 0.18</td>
<td>1.07 ± 0.20</td>
<td>1.01 ± 0.18</td>
<td>1.01 ± 0.18</td>
<td>1.07 ± 0.20</td>
<td>1.01 ± 0.18</td>
</tr>
</tbody>
</table>

### LDL (mmol/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.94 ± 0.98</td>
<td>2.21 ± 0.73</td>
<td>2.27 ± 0.72</td>
<td>3.02 ± 0.64</td>
<td>2.88 ± 0.70*</td>
<td>3.09 ± 0.83*</td>
</tr>
<tr>
<td>3.02 ± 0.64</td>
<td>2.88 ± 0.70*</td>
<td>3.09 ± 0.83*</td>
<td>3.02 ± 0.64</td>
<td>2.88 ± 0.70*</td>
<td>3.09 ± 0.83*</td>
</tr>
</tbody>
</table>

### Glu (mmol/L)

<table>
<thead>
<tr>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
<th>Day 0</th>
<th>Day 7</th>
<th>Day 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.07 ± 4.06</td>
<td>8.15 ± 2.47</td>
<td>7.63 ± 2.78</td>
<td>7.36 ± 2.42</td>
<td>7.75 ± 2.76</td>
<td>7.24 ± 2.15</td>
</tr>
<tr>
<td>8.15 ± 2.47</td>
<td>7.75 ± 2.76</td>
<td>7.24 ± 2.15</td>
<td>8.15 ± 2.47</td>
<td>7.75 ± 2.76</td>
<td>7.24 ± 2.15</td>
</tr>
</tbody>
</table>

*P<0.01; †P<0.05

**CONCLUSION:** TPF nutrition support can significantly improve nutritional status, decrease the incidence of infective and gastrointestinal complications and improve the clinical prognosis in elderly patients with acute stroke.

**P85**

**Clinical Significance of Brazilian Propolis Interference in Patients with Mild Cognitive Impairment (MCI) in Plateau Area of Serum c-reactive Protein (hs - CRP) and Lipid Metabolism Disorders**

Y. L. Li¹, X. Zhong¹, C. Du¹, H. J. Li¹, Z. Wu², Hiroshi Nakanishi², A. Q. Zhu¹, ¹Institute of Geriatrics, Qinghai Provincial People's Hospital, Xining, 810007, Qinghai, China; ²Department of Aging Science and Pharmacology, Faculty of Dental Science, Kyushu University, Japan

**OBJECTIVE:** Lipid levels and the entire C-reactive protein (hs-CRP) level are closely associated with cerebrovascular disease. Cerebral ischemia and hypoxia and chronic inflammation caused by the body’s stress response is caused to basic dementia onset of pathological processes. Brazilian propolis has potential protective effects on hypoxia-induced neuroinflammatory responses by microglia. This study was to investigate the effects of Brazilian propolis on the metabolism of hs-CRP and lipid with mild cognitive impairment (MCI) patients.

**METHODS:** 70 MCI patients were divided into control and treatment groups, 35 cases respectively using random number (patients diagnosed from March to September in 2012 by Institute of Geriatrics in Qinghai Provincial Hospital). The control group was treated with placebo, and treatment group received Brazilian propolis (purchased from Yamada Apiculture Center, Inc Ltd. 6/day, bid). The course lasted for 6 months. Pre- and post-treatment in mini-mental status scale (MMSE) was compared and the contents of hs-CRP, TC, TG, and LDL in plasma were measured.

**RESULTS:** The results revealed that compared to pre-treatment, MMSE scores was significantly higher (T=-7.699, P<0.01); hs-CRP and LDL level in sera was significantly lower (T=7.470, T=8.535, P<0.05). In the sera contents of TC and TG, there were no significant difference between treatment and control group.

**CONCLUSION:** In this research, Brazilian propolis might have some functions to improve memory and to reduce inflammatory cytokines and to improve lipid metabolism of MCI patients in high altitude hypoxia environment.
Study of the Influences of Vegetarian Diets on Atherosclerosis in the Elderly

X. H. Dai, J. H. Yu, W. F. Xu, J. Zhang, H. Y. Chen, G. S. Ye, Y. X. Su. The Sixth People's Hospital of Shaoxing, Zhejiang, 312000, China

OBJECTIVE: The purpose of this study was to evaluate influences of vegetarian diets on the risk factors related with atherosclerosis in the elderly and to investigate the effects on atherosclerosis in the elderly.

METHODS: One Hundred and fifty vegetarians and 150 omnivores for at least two years were enrolled. They were matched with the risk factors related with the atherosclerotic diseases. Their basic data, including the dietary habits, total cholesterol (TC), triglycerides (TG), high-density-lipoprotein-cholesterol(HDL-C), low-density-lipoprotein-cholesterol (LDL-C), serum folic acid, vitaminB₁₂(VB₁₂), homocysteine were collected. Fasting blood taken from carotid artery, liver and the intimal medial thickness (IMT) as well as prevalence rate of the fatty liver disease were determined by the B ultrasound.

RESULTS: TC, TG, HDL-C, LDL-C, Hcy, VB₁₂, IMT and prevalence rate of fatty liver disease in the vegetarians were lower than those in the omnivores(P<0.01).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Control group (n=150)</th>
<th>Treatment group (n=150)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TG(mmol/L)</td>
<td>1.66 ± 0.34</td>
<td>1.87 ± 1.00*</td>
</tr>
<tr>
<td>TC(mmol/L)</td>
<td>4.14 ± 0.69</td>
<td>4.89 ± 0.91*</td>
</tr>
<tr>
<td>HDL(mmol/L)</td>
<td>1.16 ± 0.24</td>
<td>1.28 ± 0.22*</td>
</tr>
<tr>
<td>LDL(mmol/L)</td>
<td>2.42 ± 0.62</td>
<td>3.03 ± 0.81*</td>
</tr>
<tr>
<td>Hcy(μmol/L)</td>
<td>75.84 ± 19.41</td>
<td>124.86 ± 45.01*</td>
</tr>
<tr>
<td>IMT (mm)</td>
<td>0.84 ± 0.48</td>
<td>0.68 ± 0.25*</td>
</tr>
<tr>
<td>Folate (µg/L)</td>
<td>342.40 ± 249.60</td>
<td>333.50 ± 146.30</td>
</tr>
<tr>
<td>Vit B₁₂ (ng/L)</td>
<td>475.52 ± 249.41</td>
<td>368.61 ± 251.52*</td>
</tr>
<tr>
<td>Fatty liver (%)</td>
<td>42 (28.00%)</td>
<td>6 (4.00%)*</td>
</tr>
</tbody>
</table>

* P<0.01

CONCLUSIONS: The vegetarian diets may affect the risk factors of atherosclerosis and have a positive role in the prevention and treatment of atherosclerotic disease in the elderly.

Correlation between LRRK2 Gene, R628P Mutation and Parkinson's disease in Xinjiang

S. Zeng¹, X. L. Yang¹, Y. N. Yao², ¹Senior Cadre Ward, Affiliated Tumor Hospital of Xinjiang Medical University; ²Department of Internal Medicine, the First Affiliated Hospital of Xinjiang Medical University
OBJECTIVE: To study correlation between LRRK2 gene R1628P mutation and Xinjiang Uygur and Han populations in Parkinson disease (PD) in the pathogenesis, and to identify whether there exists differences in distribution of two nationalities in the LRRK2 gene R1628P mutation.

METHOD: Total of 611 subjects (Han 330, Uygur 281 cases) were selected and divided into two groups: normal group 281 (Han 170, Uygur 111 cases), control group 330 (Han 160, Uygur 170 cases). R1628P gene mutation analysis was made in Xinjiang Uygur and Han population by using the polymerase chain reaction restriction fragment length polymorphism and DNA sequencing of LRRK2.

RESULTS: In Xinjiang Uygur PD case group and control group of LRRK2 gene R1628P after enzyme cutting site, only GG type was found, with no GC type and no heterozygous and homozygous mutant type CC, which were consistent with sequencing results, and no GC type and CC type were detected in the LRRK2 gene mutation of R1628P. The mutation frequency in the two nationalities was 0, and there were no statistical significance in the distribution of LRRK2 gene R1628P polymorphism in age and gender (P >0.05).

CONCLUSION: There is no evidence that LRRK2 gene R1628P mutation is associated with the Xinjiang Uygur and Han patients with PD, which does not exclude the association of other mutations in LRRK2 gene with the onset of Uygur, Han PD. The results need to be further proved in different regions and the association of LRRK2 gene mutation with the occurrence of PD needs to be studied.

P88
Correlation between LRRK2 Gene G2019S, R1441C Mutation and Parkinson's disease

X. X. Li¹, Q. Luo², X. L. Yang², ¹Neurological Center, the First Affiliated Hospital of Xinjiang Medical University, Urumqi 830011, China, ²Senior Cadre Ward, Tumor Hospital of Xinjiang Medical University, Urumqi 830011, China

OBJECTIVE: The aim of this study was to discuss the correlation between LRRK2 gene G2019S mutation, R1441C mutation and Parkinson's disease in Uygur.

METHODS: 130 cases were selected and were divided into two groups: the case group (130 cases), control group (179 cases). Then, their LRRK2 geneG2019S and R1441C mutation were analyzed by the polymerase chain reaction (restriction fragment length polymorphism (PCR-RFLP)) and DNA sequencing method.

RESULTS: LRRK2 gene G2019S was recognized as GG type and R1441C recognized as CC type by enzyme respectively in PD group and control group with no occurrence of mutation and new hybrid. After sequencing and enzyme digestion, there were no cases of LRRK2 mutation. The LRRK2 gene of G2019S (6055 G> A ) site of GA type and R1441C (3421C>T) site of CT type were not detected in Xinjiang Uyghur (PD in the case group) and the control group. The mutation frequency was 0. There were no significant differences in distribution (G2019S and R1441C of genotype, $\chi^2$=0.00, P>0.05; G2019S and R1441C of allele, $\chi^2$=0.00, P>0.05). The LRRK 2 gene G2019S(6055 G> A ) and R1441C 4321C>T) mutation were no significant differences in distribution of age and gender (P > 0.05).

CONCLUSION: There is no evidence of Uygur PD patients G2019S mutation and R1441C mutation of LRRK2 gene. This is not to say that other LRRK2 gene mutations are not associated with Uygur PD.
Effect of Abnormal Savda Munziq on the oxidative stress response of Parkinson’s disease rat models

J. P. Liu¹, Ekim Mahsum², X. L. Yang¹, ¹ Senior Cadre Ward, the First Affiliated Tumor Hospital of Xinjiang Medical University, Urumqi 830054, China; ² Institute of Urumqi Medicine of Xinjiang Medical University, 830011, Urumqi, China

OBJECTIVE: To observe the effects of Abnormal Savda Munziq (ASMq) on the behavior and oxidative stress response of Parkinson’s disease (PD) rat models.

METHODS: PD rats were produced by stereotactic injection of 6-OHDA into the substantia nigra compacta (SNc) and the midbrain ventral tegmental area (VTA) of the right side of the brain. We set up regular blank control group and the PD models were randomly divided into the model blank control group, the madopar group (madopar 125mg/kg), and the low, middle and high dose of ASMq group(1g/kg, 3g/kg, 6g/kg), and each group had 10 rats. The behavior of each group rats was observed before and after 40 days of treatment. After the treatment, each group got randomly 2 rats for the immunohistochemical detection for the quantity change of tyrosine hydroxylase (TH) expression.

RESULTS: Compared with the model blank control group, the number of rotation in low dose of ASMq group was (12.50± 1.50) (r/min), which did not decrease significantly. There was no statistical significance (P>0.05), but the number of rotation was respectively (6.00±1.07), (10.38±1.69), (7.00±1.31) in the madopar group, middle and high dose of ASMq group. They decreased significantly, and the data had statistical significance (P<0.01). Compared with the model blank control group, the TH expression of low dose of ASMq group was (9.13±2.23), the increase was not significant. There was no statistical significance (P>0.05), but the TH expression of the madopar group, middle and high dose of ASMq group was respectively (50.38±2.33), (25.36±2.56), (48.13±4.00). They were increased significantly, and the data had statistical significance (P<0.01). Compared with the model blank control group, the content of SOD and GSH-PX in low dose of ASMq group was (111.74±6.22) U/mg and (177.95±4.59) U/mg; the increase was not significant; the content of MDA was (7.02±0.40) nmol/ml; the decrease was not significant; there was no statistical significance(P>0.05). The content of SOD in the madopar group, middle and high dose of ASMq group were respectively (146.82±6.19), (123.27±5.74), (140.48±11.05) U/mg. The content of GSH-PX were respectively (222.92±4.83), (85.46±8.20), (219.03±2.66) U/mg; they were increased significantly; the content of MDA was respectively (4.89±0.24), (6.12±0.29), (5.21±0.38) nmol/ml; they were decreased significantly; all the data had statistical significance (P<0.01). Compared with the madopar group, the number of rotation, the TH expression and the content of SOD, GSH-PX and MDA in high dose of ASMq group, there was no statistical significance(P>0.05), although the above mentioned indicators in middle dose of ASMq group had improved significantly, there was no statistical significance(P>0.05). Compared with the high dose of ASMq group, the above mentioned indicators in middle dose of ASMq group, all the data had statistical significance (P<0.01).

CONCLUSION: The high and middle dose of ASMq could significantly improve the behavior and maybe have anti-oxidant property. The effects of high dose group were similar with the madopar group and superior to those of the middle and low dose of ASMq.

Microarray-Based Analyses in Monocytes of Chinese Uygur Patients with Parkinson's disease and Cognitive Impairment
OBJECTIVE: The study aimed to identify potential biomarkers associated with Chinese Uygur Parkinson's disease (PD) with cognitive impairment (PD-CI) in peripheral monocytes.

METHODS: We applied gene expression profiling to the study of peripheral monocytes from 3 Chinese Uygur patients with PD-CI and 3 healthy control subjects. Healthy control subjects were matched for age and gender with PD-CI subjects. RNA was extracted from the monocytes samples and the gene expressions were measured using the Illumina HumanHT-12 v4.0 Expression BeadChip, according to the screening criteria of Ratio≥2 and Ratio≤-2. At last, QuantiFast SYBR Green PCR (qRT-PCR) test was performed on samples collected from 31 PD-CI subjects and 35 controls to verify the microarray results.

RESULTS: By using this DNA microarray technology, 15,893 candidate genes were found. 177 genes expressions were found with more than two fold up-regulation and 97 genes were more than two fold down-regulation. As compared with the normal, qRT-PCR confirmed that the expression of SNCA and FBXW8 associated with cognitive impairment of PD were significantly different (P<0.05). The over-expression of DNAJB4 may contribute to apoptotic mechanism of PD-CI (P<0.05).

CONCLUSION: PD-CI affects gene expression in peripheral monocytes. SNCA、FBXW8 and DNAJB4 gene may be the potential biomarkers of Chinese Uygur patients with PD-CI.

P91
Polymorphism of PINK1 Gene T313M of Parkinson's Disease in Xinjiang Uygur and Han Nationality

Q. Luo, X.L.Yang, Senior Cadre Ward, Tumor Hospital of Xinjiang Medical University, Urumqi 830011, China

OBJECTIVE: The study aimed to investigate association between polymorphism T313M at exon 4 and Parkinson's disease (PD) in Xinjiang Uygurs and Han nationality.

METHODS: The genetic DNA was extracted from 364 PD patients of Uygur and Han Ethnic group as normal and 346 as control. The PINK1 gene's exon 4 was amplified by polymerase chain reaction (PCR). Then the exons were digested by restriction fragment length polymorphism. The gene type and allele frequency were identified by agarose gelelectrophoresis to observe polymorphism at T313M, and then were tested by DNA sequencing analysis.

RESULTS: There was statistical significance between PD group and control group of Han Ethnic in T313M polymorphism allele frequency ($\chi^2=6.247, P<0.05$), there was significant difference between Uygur Ethnic and Han Ethnic in T313M polymorphism allele and genotype frequency ($\chi^2=5.475, \chi^2=10.950, P<0.05$).

CONCLUSION: Our findings suggest that polymorphism at T313M of PINK1 might be associated with genetic susceptibility in Parkinson disease patients from Uygur ethnic and Han ethnic.

P92
Study on Prevalence and Influential Factors of Parkinson's disease of Uygur
Residents in the area of Hetian, Xinjiang

Q. Luo¹, X. L. Yang¹, H. X. Song², Y. L. Wang³, Y. N. Yao³,
¹Senior Cadre Ward, Tumor Hospital of Xinjiang Medical University, Urumqi 830011, China; ²Department of Neurology, the People’s Hospital Affiliated to Hebei Medical University, Hebei, 050000, China

OBJECTIVE: To observe the related factors and prevalence of Parkinson's disease of Uygur residents in the area of Hetian, Xinjiang Uygur Autonomous Region.

METHODS: We used a population-based prospective cohort study by using structure questionnaires to investigate the related factors of PD. The prevalence rate of each age group in Hetian, Xinjiang, and PD risk factors were assessed by using univariate analysis and multivariate conditional logistic regression analysis.

RESULTS: Among the 5,932 survey participants from Hetian Prefecture, Xinjiang, 88 cases, who were Uyghurs, were found with PD, and the prevalence rate of each age group in Hetian, Xinjiang was 1.48% (1.32%), and prevalence for male over 45 years of age was 1.68% (1.59%), and for female was 1.28% (1.36%). The standardized prevalence of PD in Hetian, Xinjiang was 1.32% as the standardized of The Fifth Population Census in China. Uni-variate analysis showed that more exercise, social activities, eating nuts were the protective factors for PD; and the history of pesticide exposure, the family history of PD, barbecue were risk factors for PD. Multi-factor conditional logistic regression analysis showed that: sports, social activities can reduce the risk of PD; and pesticide exposure history, PD family history increased the risk of PD.

CONCLUSION: PD is the result of the interaction of many factors, and more exercise and social activities are the protective factors for PD, and PD family history and the history of pesticide exposure are risk factor for PD.

P93
Plasma Hypersensitivity C- Reactive Protein Levels in Patients with Parkinson’s Disease in Xinjiang Urumqi

L. Tang, X. L. Yang, Senior Cadre Ward, the Affiliated Tumor Hospital of Xinjiang Medical University

OBJECTIVE: To understand the relationship of Plasma hypersensitive C-reactive protein (hs-CRP) level between Parkinson's disease (PD) patients and healthy controls in Xinjiang Urumqi area; at the same time to explore the factors related to the PD, so as to provide a basis for further study of the cause and treatment of PD.

METHODS: PD epidemiological investigation of the residents in Urumqi was made, according to the UK PD Society Brain Bank Clinical Diagnostic Criteria. 126 cases were diagnosed with PD, and 120 cases were randomly selected into the control group according to their age, gender, ethnic group, etc using the case-control study method. Each candidate received physical and neurologic examinations and determination of plasma hs-CRP.

RESULTS: ① Plasma hs-CRP levels of PD patients was (1.16±1.19 mg/dl) higher than that of the control group (0.38±0.22 mg/dl), and there was significant difference between them (P<0.001). The level of hs-CRP in plasma of Uygur PD patients (1.35±1.48 mg/dl) was higher than that of the control group (0.42±0.25 mg/dl), and there was significant difference between them (P<0.001); The level of plasma hs-CRP in Han PD patients (1.10±1.09 mg/dl) was higher than that of the control group
(0.36±0.22 mg/dl), and there was significant difference between them (P<0.001). ② plasma hs-CRP level of PD patients in different sex (1.08±0.74 mg/dl, 1.36±1.31 mg/dl) and different ethnic groups (1.09±1.08 mg/dl, 1.35±1.48 mg/dl) had no significant difference (P>0.05). The PD patients were then divided into 3 groups: 0-5 years group, 5-10 years group, 10-15 years group according to the years of PD. Plasma hs-CRP level was of no significant difference among the three groups and there had nothing to do with the duration of the disease.

CONCLUSION: There was correlation between plasma hs-CRP levels and occurrence of PD. Increase of plasma hs-CRP levels might be one of the risk factors of PD, and nerve inflammation is likely to be an important factor in the pathogenesis of PD.

P94
Sirt3 Expression Alteration in APP/PS1 Double Transgenic Mouse Model of Alzheimer’s Disease

W. X. Yang¹, Y. Lu², W. H. Yu¹, ¹Institute of Neuroscience, Chongqing Medical University, Chongqing (400016), China; ²Department of Geriatrics, The First Affiliated Hospital of Chongqing Medical University, Chongqing (400016), China

BACKGROUND: Alzheimer’s disease is an age-related neurodegenerative disorder, and the underlying mechanisms remain poorly understood. Emerging data has been proposed that mitochondrial dysfunction is one of prominent causes of Alzheimer’s disease (AD) progress. Sirtuin-3 (Sirt3) is a member of sirtuins family of nicotinamide adenine dinucleotide (NAD+) dependent deacetylases, the main mitochondrial lysine deacetylase which regulated a variety of mitochondrial functions and suppressed mitochondrial related physiology in the context of deficiency sirt3. This study aimed to confirm the expression of sirt3 and likely association with sirt3 and mitochondrial dysfunction in AD.

METHODS: We identified the expression of sirt3 in APP/PS1 double transgenic mice from transcriptional and translational levels respectively using real time quantitative RT-PCR and western blotting. Age-and gender-matched wild-type (WT) littermates were used as control. Mitochondrial sirt3 expression quantity was observed in the hippocampus and cortex of APP/PS1 double transgenic mice using immunohistochemistry.

RESULTS: Our analysis revealed that the expression of sirt3 was significantly reduced in the hippocampus and cortex of APP/PS1 double transgenic mice compared with WT littermates (P <0.05). Real time quantitative RT-PCR showed a statistically reduction of sirt3 gene expression between APP/PS1 double transgenic mice and WT littermates (0.831 ± 0.216 vs. 1.046 ± 0.220, P<.05). The same results found in Sirt3 protein expression levels using western blotting. The ratio of mean optical density (MOD) of Sirt3/β-actin in the cortex was 0.767 ± 0.111 in APP/PS1 double transgenic mice compared to 1.376 ± 0.208 in the WT littermates (P<.001). Immunohistochemistry analysis was consistent with western blotting. The ratio of MOD of Sirt3 in integral optical density/total area was significantly difference between APP/PS1 double transgenic mice and WT littermates (0.584 ± 0.018 vs. 0.709 ± 0.046, P<.001). These results showed that sirt3 was associated with mitochondrial dysfunction in APP/PS1 transgenic mice.

CONCLUSION: Mitochondrial sirt3 might play a significant role in mitochondrial dysfunction in the APP/PS1 double transgenic mice of Alzheimer’s disease.
Safety of Oral Aspirin Use in 445 the Aged Patients

J. Li, S. T. Yang, Q. Li, J. Kong, The First Hospital of Jilin University, Changchun,130021, China

OBJECTIVE: To study the safety of oral aspirin in the aged patients and to provide a clinical basis for oral aspirin use for aged patients.

METHODS: A retrospective study was conducted for this investigation in 445 aged patients (over 80 years old). Spectrum of disease, complications, duration of oral aspirin, hemorrhage of digestive tract, cerebral hemorrhage and platelet count were analyzed.

RESULTS: The average age of medicine taking is 3.82±2.4 years. 294 cases (66.07%) had taken aspirin for more than 5 years. The main diseases of the patients are cardiovascular (85.39%) and cerebrovascular diseases (12.81%), and 90.34% patients had two or more complications. Only 1.35% (6 cases) had adverse reactions of upper gastrointestinal bleeding, in which 5 cases had primary diseases which could cause upper gastrointestinal bleeding (liver cirrhosis, esophageal and gastric varices). 0.67% (3 cases) had cerebral hemorrhage. The average annual incidence of gastrointestinal bleeding and cerebral hemorrhage is 3.5‰ and 1.7‰ respectively. Platelet counts in 1 year, 2 year, and 3 year were (192.47±61.39) x10^9/L , (194.71±60.82) x10^9/L, (189.79±66.27) x10^9/L, respectively.

CONCLUSION: The safety of long-term use of aspirin for aged patients for the secondary prevention of cardiovascular and cerebrovascular diseases is acceptable. The study provides a clinical basis for oral aspirin therapy in aged patients.

Crosstalk between the Smad and JNK Pathway in the Formation of Myofibroblast in Bleomycin-induced Pulmonary Fibrosis

D. Li, Y. F. Du, L. Qian, X. Y. Hao, X. J. Liu, Department of Geriatrics, the First Hospital of Shanxi Medical University, Taiyuan 030001, China

OBJECTIVE: To investigate the relationship between JNK and Smad pathway in the formation of myofibroblast in bleomycin-induced pulmonary fibrosis.

METHODS: 96 male C57BL/6 mice were randomly divided into four groups: control group, model group injected with bleomycin, SP600125 group given bleomycin and SP600125, a specific inhibitor of JNK, and SB431542 group administered bleomycin and SB431542 that can inhibit the Smad pathway. Mice were randomly sacrificed on days 7, 14 and 28 after bleomycin treatment. Histological changes in the lungs were evaluated by HE and Masson stain and scored. The content of hydroxyproline was measured by alkaline hydrolysis method, the localizations of α-SMA were determined by immunohistochemistry and the expression of p-JNK, p-Smad3 and α-SMA were measured by Western blot.

RESULTS: Although fibrotic lesions were observed in group SP and SB, both the intensity and extent of the lesions were less than those of group M (P<0.05). In the lung tissue of control group, the expression of α-SMA only located in the cytoplasm of smooth muscle cells which surrounded the larger vessels and the bronchial walls. In addition to the bronchial and vascular wall, larger bundles of α-SMA positive cells were visible after bleomycin treatment. Intratracheal injection of bleomycin induced a significant increase in the amount of HYP, p-JNK, p-Smad3 and α-SMA at any time point assessed.
(P<0.05). On days 14 and 28, the content of HYP in group SP and group SB were lower than that in group M (P<0.05). Treatment with SP600125 and SB431542 reduced the amount of p-JNK, p-Smad3 and α-SMA on day 7 to day 28. The SB431542 administration was associated with a more significant reduction in the protein expression of p-JNK, p-Smad3 and α-SMA on day 14, 28 compared to SP600125 (P<0.05).

CONCLUSION: There is an interdependent relationship between the JNK and Smad pathways in the formation of myofibroblast in bleomycin-induced pulmonary fibrosis. The JNK pathway would reinforce Smad signaling by phosphorylating Smad3, while the activation of JNK is Smad-dependent.

P97
The Clinical Study of Rosuvastatin on Lower Limb Atherosclerosis of the Elderly

J. Li, L. L. Zhang, Q. Li, The First Hospital of Jilin University, Jilin Chang chun,130021 China

OBJECTIVE: This study aimed to investigate efficacy and safety of rosuvastatin in the anti-atherosclerosis of lower limb arteries, and to compare the results Simvastatin.

METHODS: 82 elderly subjects with lower limb atherosclerosis on baseline were enrolled in this study for lower limb artery ultrasound examinations. They were devided into two groups: a group given 10 mg of rosuvastatin (n = 42) for rosuvastatin, the other given 40 mg of simvastatin (n = 40) for simvastatin. The two groups were given conventional therapy for underlying diseases. Lower limb artery ultrasound examinations were performed for the assessments of intima-media thickness (IMT), plaque volume, the degree of arteriosclerosis and stenosis, and fasting venous blood samples were obtained before and after 24 weeks statin administration.

RESULTS: Compared with simvastatin group, total cholesterol (3.32±0.35 vs. 3.96±0.60 mmol/L), low-density lipoprotein cholesterol (2.06±0.26 vs. 2.33±0.21 mmol/L), triglycerides (1.97±0.29 vs. 2.15±0.31 mmol/L), intima-media thickness (IMT), plaque volume, the degree of arteriosclerosis and stenosis decreased significantly (p < 0.05) (see table 1) in rosuvastatin group during the intervention. No significant changes were observed at fasting blood-glucose and creatinine levels in each group. Adverse effects such as elevated liver enzymes, rhabdomyolysis and hemorrhagic stroke were not observed during the investigation.

CONCLUSIONS: 24 weeks treatment with rosuvastatin in the elderly with lower limb atherosclerosis significantly reduced the low-density lipoprotein cholesterol and atherosclerosis compared with simvastatin. Drug tolerability was similar in both groups.

P98
Non-synchronic Alteration of Clathrin and PICALM Involved in the Endocytosis in Aβ1-42 Treated Neurons in Vivo

R. Shi, Y. Lü, Department of Geriatrics, The First Affiliated Hospital of Chongqing Medical University, Chongqing (400016), China

OBJECTIVE: Recent studies have shown that endocytosis involves in the mechanisms of Alzheimer's disease (AD). Clathrin and phosphatidylinositol binding clathrin assembly protein (PICALM), as key proteins of clathrin-mediated endocytosis (CME), probably participate in the CME dysfunction in AD development. Hence, the aim of the present study was to investigate the relationship between CME and
AD via the alteration of Clathrin and PICALM.

METHODS: Primary culture of cortex neurons was optimized and high purity of neurons was obtained. 1μM Aβ_{1-42} oligomer treated neurons were used as cell model of AD. Clathrin and PICALM were further detected by using reverse transcription-polymerase chain reaction (RT-PCR) and western blotting (WB) from transcriptional level to translational level.

RESULTS: Clathrin decreased significantly in protein and mRNA level (p<0.05) in cell model of AD compared to control neurons. However, PICALM protein and mRNA expression had no significant change in AD cells compared with control neurons (p>0.05).

CONCLUSION: Non-synchronic alteration of clathrin and PICALM might contribute to CME dysfunction in Alzheimer’s disease.

P99
Primary Percutaneous Coronary Intervention vs. Intravenous Thrombolytic Therapy in Very Old Patients with ST-elevation Myocardial Infarction: a Meta Analysis of the Published Literature

L. Wang, Q. W. Chen, Q. Wu, D. Z. Ke, Department of Geriatrics Cardiology, the Second Affiliated Hospital of Chongqing Medical University, Chongqing 400010, China

OBJECTIVE: The goal of this study was to compare the effectiveness of primary percutaneous coronary intervention (PPCI) with thrombolysis therapy for acute ST-segment elevation myocardial infarction (STEMI) in very elderly patients.

METHODS: A comprehensive search was to identify randomized trials of PPCI versus thrombolysis therapy for STEMI in very elderly patients. The primary end points were the incidences of mortality, non-fatal reinfarction or disabling stroke at 30 days. The second end points were the occurrences of major bleeding and recurrent ischaemia at one year.

RESULTS: Eight trials enrolling 3772 subjects (2896 patients in PPCI group vs. 876 patients in thrombolysis group) were included in analyses. Patients assigned to PPCI were less likely to die (OR = 0.51; 95%CI: 0.40 ~ 0.64; P < 0.001), and had lower incidence of recurrent ischaemia (OR = 0.33; 95%CI: 0.16 ~ 0.67; P = 0.002) than those assigned thrombolytic therapy in very elderly patients with STEMI. There were no significant differences between PPCI and thrombolysis therapy for non-fatal reinfarction (OR = 0.53; 95%CI: 0.26 ~ 1.08; P = 0.08), disabling stroke (OR = 0.81; 95%CI: 0.38 ~ 1.74; P = 0.59), and major bleeding (OR = 1.00; 95%CI: 0.46 ~ 2.18; P = 1.00) in very elderly patients with STEMI.

CONCLUSIONS: PPCI is superior to thrombolysis therapy for the treatment of STEMI in very elderly patients. Early contemporary thrombolysis therapy may be a safe alternative to PPCI in the very elderly when this is not available.

P100
Clinical Characteristics, Findings of Coronary Angiography, and Percutaneous Coronary Intervention for Old Women with CHD: a 10-year Consecutive Study of 2496 Chinese Inpatients
OBJECTIVE: The morbidity and mortality of coronary heart disease (CHD) are more frequent in old women than in old men. We aimed to investigate clinical features, characteristics of coronary angiography and PCI for Chinese old women with CHD.

METHODS: 2496 inpatients were divided into old women with CHD group (918 cases), old women without CHD group (616 cases), old men with CHD group (842 cases), and middle-aged women with CHD group (120 cases). The baseline clinical and angiographic characteristics, number of PCI treatments and stents implanted, and Gensini score were employed for analysis.

RESULTS: The incidence of two-vessel disease (32.03% vs. 42.76%, \(P<0.01\)), multivessel disease, complex lesions (6.43% vs. 9.38%, \(P<0.01\)), rates of PCI (48.04% vs. 53.33%, \(P<0.01\)) and number of stent implantation (1.85±1.00 vs. 2.05±1.11, \(P<0.05\)), and Gensini score (19.75±25.79 vs. 25.13±29.98, \(P<0.01\)) in old women with CHD group were higher than that in middle-aged women with CHD group (all \(P<0.05\)), but had lower values (all \(P<0.05\)) compared to old men with CHD group.

Age (\(OR=1.085, P<0.001\)), FBG (\(OR=1.084, P=0.032\)), TG (\(OR=1.174, P=0.015\)), and LDL-C (\(OR=1.407, P<0.023\)) were independent risk factors for CHD and associated with the severity of coronary stenosis (\(B=0.697, P<0.001\); \(B=1.037, P<0.001\); \(B=1.868, P<0.001\); \(B=2.655, P=0.022\); respectively) (all \(P<0.05\)) in old women.

CONCLUSIONS: The old women had complex coronary lesions, more PCI treatments and stents implanted than middle-aged women, but had lower values compared to old men. Age, FBG, TG, and LDL-C were correlated with angiographic severity and extent of old women with CHD.

P101
Relationship between Bone Loss and Coronary Artery Disease: A Meta-analysis.

Y. M. Lin, Q. W. Chen, Department of Geriatrics Cardiology, The Second Affiliated Hospital of Chongqing Medical University, Chongqing 400010, China

BACKGROUND: Laboratory and observational studies suggest that both bone loss and coronary artery disease (CAD) are age-related processes. However, although most of previous studies indicated that osteoporosis was a disease for older women, accelerated bone loss also occurred in old men. Several studies have proved the relationship between osteoporosis and coronary artery calcification, but it remains a matter of debate. The objective of study was to investigate the relationship between bone loss and coronary artery disease.

METHODS: English Literature search in PUBMED and PloS databases for relevant studies was conducted in addition to the manual searching and document delivering for clinical trials, which were classified, analyzed and divided into two groups (normal Bone Mineral Density (BMD) and Low BMD) according to the World Health Organization (WHO) diagnostic classification, and then the percentage of patients with coronary artery disease in each group was calculated, and examined the association between bone loss and CAD was studied. Information on sample size, participant characteristics was abstracted.

RESULTS: Data from 5 separate study populations of 3741 persons met the inclusion criteria. Individuals with low BMD, compared to normal BMD, had an increased incidence of CAD (odd ratio 2.5 (95% confidence interval 2.08 to 3.10)).

CONCLUSION: This analysis suggests that the population with bone loss may have the higher risk for CAD compared to those with normal BMD in the elderly.
Salidroside Stimulates Mitochondrial Biogenesis in a Cellular Senescence Model of Human Fibroblasts

G. X. Mao, X. L. L. Lv, Y. Z. Wang, G. F. Wang, J. Yan, Provincial Key Lab of Geriatrics & Geriatrics Institute of Zhejiang Province, Zhejiang Hospital, Hangzhou, 310013, China

OBJECTIVE: To investigate the effect of salidroside (SAL) on delaying cellular senescence according to our previous work.

METHODS: SA-Gal (senescence associated Galactosidase) staining was used to evaluate the senescent population of WI-38 cells. Intracellular reactive oxygen species (ROS) and mitochondrial mass (MM) were measured by flow cytometry using H₂DCFDA (2',7'-dichlorodihydrofluorecein diacetate) and NAO (nonylacridine orange), respectively. WI-38 cells near senescent were treated with SAL or RES (resveratrol, a Sirt1 activator, set as a positive control for stimulating MM). Mitochondrial function was assessed by the expression of ATP synthase β and NADH dehydrogenase ND6. Regulation of the SIRT1-PGC-1α signaling pathway was analyzed by Western blot and the relative expression levels of molecules were calculated according to the value of optical density given by the Image J software. One-way ANOVA test was used for data analysis.

RESULTS: WI-38 cells became fully senescent when they reached at 52PD under current culture conditions and cells at PD50 as near senescence were used for the investigation of mitochondrial biogenesis. Compared with the cells at 28PD (young control), 50PD cells had higher ROS levels (181.3±13.8% vs 100%) and lower MM (74.6±3.1% vs 100%). SAL treatment reduced ROS levels for 50PD cells down to 128.7±4.9% and restored MM up to 87.5±6.7%. These effects were comparable to those achieved by RES treatment (ROS 144.1±10.0%; MM 86.5±5.7%). Similar to that of RES, SAL enhanced protein expression of ATP synthase β and ND6 (142.9±2.2% and 156.1±7.7% of controls, respectively), suggesting that SAL improves mitochondrial function. Both SAL and RES treatment reversed declines of SIRT1 and PGC-1α expression in 50PD cells compared to the young controls. Moreover, SAL induced mitochondrial biogenesis was partly attenuated by a pretreatment of sirtinol, a SIRT1 inhibitor, which can potently block the increase of MM in RES treated cells.

CONCLUSIONS: Our findings suggest that SAL induces mitochondrial biogenesis partly through SIRT1-PGC-1α signaling. Besides, our data provide a strong biological basis for further investigation of SAL treatment as a potential interventional strategy to retard the aging process and attenuate age-related diseases in humans.

Changes of Aorta in Streptozotocin-Induced Diabetic Rats

Z. J. Tan, Z. R. Xu, Q. F. Gui, W. Z. Wu, Y. M. Yang, The First Affiliated Hospital, School of Medicine, Zhejiang University, Hangzhou, China

OBJECTIVE: To find out the effects of diabetes mellitus on macrovascular lesion.

METHODS: Forty 8-week old male Sprague-Dawley rats, weighing 180-200g, were randomly divided into 2 groups: control group (NC group), diabetes mellitus group (DM group). The rats from NC that were fed with regular chow for 2 weeks received vehicle. The rats in diabetes mellitus group were fed...
with high-diet foods for 2 weeks, and then streptozotocin (STZ) in induced diabetic rats was injected intraperitoneally in a dose of 35mg/kg. During the following 14 weeks, all rats were given with food and water *ad libitum*. After 16 weeks, aortic arch was isolated from SD diabetic rats and assessed by pathological section using HE staining.

**RESULTS:** Under light microscope, there were no changes in the aortic wall structure of each layer, and intima was smooth and the membrane elastic fibers were normal in NC group. In diabetic group, the aortic wall structure was not clear, and intima was thickened and gathered foam cells, membrane elastic fibers collapsed.

**CONCLUSION:** Diabetes mellitus accelerates the progress of vascular dysfunction, which indicates diabetes mellitus might be an independent risk of vascular lesion.

**P104**

**The Expression of Hypoxia Inducible Factor-1α and Vascular Endothelial Growth Factor in Non-Small Cell Lung Cancer**

W. S. Zhang, Y. Zhang, Q. Zhang, M. P. Zhang, S. L. Tian, J. L. Tian, G. X. Zhu, P. Lei, L. Wang, *Department of Geriatrics, Tianjin Medical University General Hospital; Tianjin Geriatrics Institute, Tianjin 300052, China*

**OBJECTIVE:** To study the hypoxia inducible factor-1α (HIF-1α) and vascular endothelial growth factor (VEGF) expression in non-small cell lung cancer (NSCLC) tissue and its relationship with microvascular density (MVD) in cancerous tissue, and to explore their relationship with NSCLC biology behavior.

**METHODS:** The samples were selected in general hospital of Tianjin Medical University, Tianjin Institute of Lung Cancer from January 2013 to December 2013, including 426 cases of NSCLC tissues and 96 cases of pulmonary benign lesions of the pathological diagnosis, by using immunohistochemical SP method to detect tissue HIF-1α and VEGF, and the expression of CD34 positive blood vessels MVD counts.

**RESULTS:** The positive expression rate of HIF-1α and VEGF in 426 cases of NSCLC was 57.3%, 66.5% respectively, and in lung benign lesions was 12.1%, 18.3%. Differences between the two groups have statistical significance (*P*<0.05); HIF-1α and VEGF expression in NSCLC organizations related to clinical staging and brain metastases (*p*<0.05). Age, gender, or pathological type were not associated with the degree of differentiation (*p*>0.05). The MVD value of NSCLC and lung benign lesions were 46±8 and 16±5, and difference was statistically significant (*P*<0.05). The expression level of HIF-1α and VEGF in NSCLC tissue was significantly higher than that of pulmonary benign lesions, and both of them were positively correlated with the presence of brain metastasis and clinical pathologic staging (*r*=5.059 and 6.951, *p*<0.05). The expression of HIF-1α and VEGF have consistency, positively correlated (*r*=0.549, *p*<0.05).

**CONCLUSIONS:** HIF-1α and VEGF involved in the development process of NSCLC, HIF-1α may promote angiogenesis of NSCLC and development of tumor through the VEGF, detection of HIF-1α and VEGF can be used as a judgment of NSCLC angiogenesis, invasion, and brain metastasis, and is expected as a new treatment for NSCLC.
Safety and Feasibility Study of Angiography of Coronary, Renal and Lower Extremity Artery in Elderly Patients with Coronary Heart Disease by Transradial Approach

X. S. Li, Q. W. Chen, Y. Wang, D. Z. Ke, Q. Wu, S. Q. Zhou, Z. M. Yuan, G. Q. Li, Department of Geriatric Cardiology, the Second Affiliated Hospital, Chongqing Medical University, Chongqing 400010, China

OBJECTIVE: To investigate the methods of angiography of coronary, renal and lower extremity artery in elderly patients with coronary heart disease by transradial approach, and to analyze the safety and feasibility.

METHODS: Two hundred and seventy five elderly patients (age≥60 years) with suspected coronary heart disease complicated with peripheral artery atherosclerosis were performed with selective angiography of coronary, renal and lower extremity artery. The patients were divided randomly into left radial artery group and right radial artery group, then each group were divided into three subgroups according to their age: lowest group (60-69 years of age), middle group (70~79 years of age), and highest group (over 80 years of age). The angiography of coronary, kidney and lower extremity artery were performed with TIG common angiography tube (100 cm) and MP A1 angiography tube (125cm) by left and right transradial approach. The success rate of radial artery puncture, angiography operation time, the amount of contrast agent, X-ray exposure time and angiography completion rate were compared between the two groups. The correlations between those indexes and ages were analyzed.

RESULTS: There was no significant difference in puncture time between left and right artery groups ($P>0.05$). The operating time of angiography, the amount of contrast agent and X-ray exposure time in left radial artery group were much less than those of right radial artery group ($P<0.01$), and the angiography completion rate was also significantly higher than that of the right radial artery group ($P<0.05$). There was significant positive correlation between age and angiography operating time in left and right radial artery group ($P<0.01$, $r=0.348$; $P<0.01$, $r=0.294$), but there was no correlation between age and X-ray exposure time in right radial artery group ($P>0.05$, $r=0.095$).

CONCLUSION: The angiography of coronary artery, lower extremity artery and renal artery through radial artery approach at the same time can increase the high success rate, and is safe and feasible. It can be regarded as the first path to perform angiography of coronary artery, kidney and lower extremity artery at the same time for the elderly patients.

P106
Cardiac Rehabilitation in Elderly Patients with Chronic Heart Failure

W. Huang, Y. L. Luo, Department of Geriatrics, the Third People's Hospital of Yunnan Province, Kunming 650011, China

OBJECTIVE: To explore the effect of cardiac rehabilitation (CR) and prognosis for the elderly patients with Chronic Heart Failure (CHF).

METHODS: Seventy-two CHF patients were randomly divided into CR group and control group. CR group(n=35) was given a comprehensive treatment protocol, including optimized drug treatment, sports training, psychological guidance, health education, lifestyle changes and vocational rehabilitation,
control group (n=37) was given routine treatment. NYHA classification, left ventricular ejection (LVEF), 6-minutes walking distance (6MWD), brain natriuretic peptide (BNP) and Minnesota living with heart failure questionnaire (MLHFQ) were measured before and after treatment. The patients were followed up for 12 months to record all-cause mortality, cardiovascular mortality and the rate of hospitalization for worsening heart failure.

RESULTS: Twelve months after treatment, in CR group, NYHA classification, LVEF (61.63±6.64 versus 56.71±7.57) and 6MWD (455.34±67.22 versus 400.49±92.09) were higher, while BNP (382.40 versus 1236.30) and MLHFQ (39.37±7.31 versus 45.20±8.77), all-cause mortality (2.9% versus 18.92%) and the rate of hospitalization for CHF exacerbation (22.86% versus 48.6%) were lower than those in control group (P<0.05). The cardiovascular mortality had no significant difference (2.9% versus 5.4%) between two groups.

CONCLUSION: Cardiac rehabilitation can improve cardiac function, and quality of life in elderly CHF patients, and also can reduce all-cause mortality and the rate of hospitalization for CHF exacerbation.

P107
Study on the Mechanisms of Vascular Smooth Muscle Cell Senescence and its Effects on Vascular Calcification

S. G. LI, W. Shao, J. J. Deng, D. Zhang, M. Ye, Department of Geriatrics, Yichang Central People’s Hospital, The First Clinic Medical School of China Three Gorges University

OBJECTIVE: To explore the mechanisms of vascular smooth muscle cell (VSMC) senescence and its effects on vascular calcification.

METHODS: 24 young rats and 24 elderly rats were divided into 4 groups: normal young group (NY group), young vascular calcification group (Y-VC group), normal elderly group (NE group) and elderly vascular calcification group (E-VC group). The rats were fed for 3 months. Light microscope was used to observe the aorta structure, and Von Kossa staining was used to test vascular calcification; mRNA and protein in aorta osteopontin (OPN), bone morphogenetic protein-2 (BMP-2), p16 and p21 were detected. Serum CRP and serum IL-6 were detected.

RESULTS: (1) The rat model of vascular calcification was successfully established according to the method previously described. Von Kossa staining showed that there was calcium deposit on the medial arterial. (2) OPN and BMP-2 mRNA and protein were higher in Y-VC, NE and E-VC groups than those in NY group (P=0.004, P=0.007, P=0.001, respectively); OPN and BMP-2 mRNA and protein in Y-VC group were higher than those in NE group (all P<0.05); OPN and BMP-2 mRNA and protein were significantly higher in E-VC group than those in NE group (P<0.05). (3) p16 and p21 protein were significantly higher in Y-VC, NE and E-VC groups than those in NY group (P<0.05); p16 and p21 protein were significantly higher in E-VC group than those in Y-VC group (P<0.05); p16 protein were significantly higher in NE group than that in E-VC group (P<0.05). (4) serum CRP and IL-6 were significantly higher in Y-VC, NE and E-VC groups than those in NY group (P<0.05); serum CRP were higher in NE and E-VC groups than those in Y-VC group (P<0.05); serum IL-6 was higher in E-VC group than that in Y-VC group (P<0.05); serum CRP and IL-6 were higher in E-VC group than those in NE group (P<0.05).

CONCLUSION: (1) Senescent vascular smooth muscle cells can induce the formation of vascular
calcification. (2) Inflammation promotes vascular smooth muscle cell senescence, and may further promote vascular calcification.

**P108**

Status of Geriatrics Continuing Medical Education in China - A Survey from PUMCH-Hopkins Geriatrics Conference

P. Zeng, M. L. Zhu, L. Kang, X. H. Liu, Division of Geriatrics, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing 100730, China

**BACKGROUND:** Geriatrics is progressing rapidly in China while geriatric education is still at the beginning stage. Geriatric staff in Peking Union Medical College Hospital (PUMCH) has worked on geriatric continuing medical education (CME) for years, and PUMCH-JHU (Johns Hopkins University School of Medicine) has hosted geriatrics conferences three times since 2011. The objective of this study aimed to investigate the status and demand of CME on Geriatrics in China.

**METHODS:** 136 participants who had participated in the geriatric conferences of PUMCH-JHU in 2013 were investigated by questionnaire survey.

**RESULTS:** Acquaintances of geriatric syndromes were higher in falls, dementia, and sleep disorder (95.6%, 91.9% and 89.7% respectively), but the percentage of approving the behavior of screening geriatric syndromes were much lower (63.3%, 42.6% and 36%). Acquaintances of geriatric syndromes were lower in syncope (39.7%) and elderly abuse (44.1%). Awareness of living wills was 29.4%.

**CONCLUSIONS:** Knowledge of geriatrics, especially basic knowledge about geriatric theory should be improved among healthcare workers.

**P109**

Recognition of Mood Disorders in Elderly Inpatients in a General Hospital

P. Zeng¹, B. Meng², X. Hong³, X. H. Liu¹, ¹Division of Geriatrics, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing 100730, China; ²Aviation Industry Corporation of China 242 Hospital of Haerbin, 150066, China; ³Department of Psychological Medicine, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing 100730, China

**OBJECTIVE:** To explore the efficacy of combination of comprehensive geriatric assessment and psychiatric consultation in recognition of mood disorders.

**METHODS:** Elderly inpatients admitted to a geriatrics ward in a tertiary general hospital in 19 months duration (Aug 1st 2011 to Feb 28th 2013) were assessed with comprehensive geriatric assessment (Zung’s self-rated depression scale and Geriatric Depression Scale-15 were included) at the admission. Geriatric interdisciplinary team services and psychiatric consultation were offered when it is necessary. Mood disorders were diagnosed by a psychiatrist according to ICD-10 criteria.

**RESULTS:** Two hundred and eighty one patients over 65 were enrolled, (mean age 75.2±6.8 years, 136 males and 145 females). Forty-nine patients were found with mood disorders, mean age 73.5±6.0 years, 16 males and 33 females. Thirty-nine depressive episodes, 5 dysthymic disorders, 2 bipolar
disorders, 2 recurrent depressive disorders, and 1 depression NOS were included. The point prevalence of mood disorders was 17.4%. The primary reason for asking for psychiatric consultation were relevant history in 7 patients, abnormal emotion recognized by doctors in 23 patients, sleep problems in 2 patients, medical unexplained symptoms in 5 patients, and positive in depression screening scales in 12 patients.

CONCLUSIONS: Mood disorders were very common in elder inpatients. Combination of comprehensive geriatric assessment and psychiatric consultation is very efficient in recognition of mood disorders in elderly. This service model should be practical in more general hospital settings to improve the availability of psychiatric service in the elderly in China.

P110
What Experience Can China Take from the United Kingdom in Terms of Establishing the Most Appropriate Model of Aged Care?

Y. F. Wang, School of Health and Social Care, Oxford Brookes University

OBJECTIVE: Identifying effective strategies for dealing with an increasing ageing population as well as improving the quality of eldercare.

METHODS: It included data searching, data collection criteria, and data collection. Sources were defined and strategies of searching were determined. Database including Cambridge journal online, CINAHL, HMIC, Science Direct, PubMed, Social science online, Sage, Wiley InterScience were searched. Data collection criteria involved studies of aged care, studies focusing on quality of life for the elderly, family care, community care and institutional care, related to Community Care Act 1990, government documents which significantly affected the change of the core module of aged care. Literature review and content analysis were conducted.

RESULTS: Findings showed that community care should be the core model, providing central focus, with institutional care as a supplement to provide long-term care as well as for people who can afford it. Although quality of life should be the essence of aged care driving the establishment of the core model, this is closely linked to the ability of the central government to provide it.

CONCLUSION: Three main aspects which affect the quality of eldercare have been identified, which consequently influence the principle of the core model of aged care: enhancing collaboration between health and social care, improving awareness of the need of long-term care and supporting and training formal and informal carers. To develop the core model of aged care, the Chinese government needs to be cautious in supporting and balancing the demands between community care and institutional care. Overall, the study argues that aged care is not only the responsibility of individual and family but of the whole society.

P111
The Geriatric Syndromes Should Be Valued in China: an Investigation in Very Old Beijing Community Senior Citizens

M. L. Zhu, X. L. Zhou, X. H. Liu, Division of Geriatrics, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing 100730, China
BACKGROUND: The health care for elder people in China is still focused on disease control. But for the elder senior with multiple diseases, geriatric syndromes (GS) have great influence on their lives. Therefore, controlling the chronic diseases merely could not improve the seniors’ quality of life (QoL). It is essential to investigate the GS in community-dwelling seniors, to know what the elder people need for geriatrics, and to deal with the problems which affect the seniors’ QoL as a high priority.

METHODS: The community-dwelling residents of 85 years-old or above were investigated by health care workers face-to-face in the urban area of Beijing.

RESULTS: 336 seniors with mean age of 96± 3yr were investigated. 27.2% subjects had a fall within one year, and 31.8% of falling seniors had more than one falls. The seniors who had urinary incontinence (UI), chronic pain, and chronic constipation were 37.1%, 37.3% and 47.6%, respectively. 10.4% had malnutrition and 50.5% had malnutrition risks accessed by MNA-SF. The nutritional status and UI reduced self-rated health satisfaction. 26% subjects had never heard of GS and geriatrics.

CONCLUSION: Geriatric syndromes are common in community-dwelling seniors, which could reduce the QoL. It is urgent to disseminate the geriatric knowledge and modify the goal of medical care for the seniors, which promotes QoL.

PI12
Beneficial Effect of Forest Bathing for Elderly Patients with Stable Chronic Obstructive Pulmonary Disease

B.B. Jia 1, Z. X. Yang 1, G. X. Mao 1, Y. D. Lv 1, W. H. Xu 1, X. L. Lv 1, Y. B. Cao 1, G. F. Wang 1, 2 1 Zhejiang Provincial Key Laboratory of Geriatrics & Geriatrics Institute of Zhejiang Province, Zhejiang Hospital, Hangzhou 310013, China; 2 Wenzhou Medical University, Wenzhou 325035, China

OBJECTIVE: To investigate the effect of forest bathing as a natural therapy for elderly patients with stable chronic obstructive pulmonary disease.

METHODS: Eighteen elderly patients with stable chronic obstructive pulmonary disease were randomly divided into two groups. One group was sent to a broad-leaved evergreen forest to experience a 4-day trip, and the other group was sent to a city area in Hangzhou as control. Peripheral blood was collected before and after the experiment, and proportions of NK, NKT-like and CD8+ T cells as well as perforin and granzyme-B expression in these cell populations were analyzed by flow cytometry. Pro-inflammatory cytokines and stress hormones were detected as well. Besides, profile of mood states (POMS) evaluation was used to assess the change of mood state of subjects.

RESULTS: There was no significant difference as for baseline health indicators of the study subjects. No significant change of indicators in the city group was observed after the experiment. While subjects exposed to the forest environment showed a significant reduction of intracellular perforin and granzyme B expression, accompanied by decreased levels of pro-inflammatory cytokines. The proportion of CD8 T cells and NKT-like cells expressing perforin decreased significantly after experiment both compared to their baseline (CD8 T cells, 3.02% vs 22.65%, P<.001; NKT-like cells, 6.84% vs 36.22%, P<.001) and compared to city group (CD8 T cells, 3.02% vs 10.90%, P<.01; NKT-like cells, 6.84% vs 16.87%, P<.05). Similarly, the proportion of NK cells expressing perforin also decreased compared to baseline (54.32% vs 93.28%, P<.001). Levels of stress hormones also decreased in forest group compared to their baseline (IL-6, 36.92 vs 97.32 ng/L, P<.01; IL-8, 88.14 vs 195.25 ng/L, P<.05; IFN-γ, 352.74 vs 845.19 ng/L, P<.01; epinephrine, 97.63 vs 197.31 ng/L, P<.05).
Meanwhile, POMS evaluation showed that the scores in the negative subscales were decreased after forest bathing trip. **CONCLUSION:** Taken together, our results indicated that forest bathing has beneficial effect on COPD patients by reducing the inflammation and stress level and thus improve their health condition.

P113
Evaluating the Effect of Forest Bathing on COPD Patients

CONCLUSION:
Taken together, our results indicated that forest bathing has beneficial effect on COPD patients by reducing the inflammation and stress level and thus improve their health condition.

**EVALUATION OF POTENTIALLY INAPPROPRIATE MEDICATIONS (PIM) AMONG OLDER INPATIENTS IN CHINA**

**OBJECTIVE:**
To evaluate both the occurrence and the factors associated with the use of PIM in elderly patients who were treated in the Department of Geriatrics in West China Hospital.

**METHODS:**
This is a retrospective cross-sectional study. A large scale cohort of 1796 men and women aged 65 and over were recruited who were discharged from the geriatric wards of West China Hospital from October 2012 to April 2013. 2012 Update Beers Criteria by the American Geriatric Society were applied to assess the use of PIM among the investigated samples.

**RESULTS:**
A review of the prescribed medications identified 954 patients with at least one PIM prescribed, covering a rate of 53.2%. Patients with PIM had higher hospitalization expenses, length of stay, comorbidities, medical prescriptions and mortality than patients without PIM (all \( P < 0.001 \)). The five most commonly taken PIMs were benzodiazepines (42.3%), drugs with strong anticholinergic properties (10.9%), megestrol (9.7%), antipsychotics (6.8%), and non-COX-selective nonsteroidal anti-inflammatory drugs (NSAIDs) (6.4%). In multiple regression analysis, PIM use was associated with the female sex (OR=1.411, 95%CI =1.106-1.799), age (OR=1.017, 95%CI=1.001-1.033), comorbidity (OR=1.291, 95%CI=1.121-1.370), and medical prescription (OR=1.082, 95%CI=1.064-1.100).

**CONCLUSIONS:**
The proportion of PIM use is relatively high in older inpatients in China. Benzodiazepines, drugs with strong anticholinergic properties, megestrol, antipsychotics, and non-COX-selective NSAIDs were the five most commonly encountered PIM in elderly Chinese patients. Female sex, age, comorbidity and medical prescriptions are the independent factors of PIM use.

P114
Effect of Alprostadil Combined with Shenkang Injection on Kidney Function in Chronic Kidney Disease of Senile Patients

**OBJECTIVE:**
To observe the effect of alprostadil combined with Shenkang injection on the treatment
METHODS: We divided 86 elderly patients with chronic kidney disease into 3 groups. The control group was treated with routine therapy. The combined treatment group was treated with alprostadil injection and Shenkang injection, while Shenkang treatment group with Shenkang injection alone. The change of renal function (Scr, BUN, Ccr, albuminuria in 24 hours, β-MG, CysC) was detected after the treatment.

RESULTS: Scr, BUN, Ccr, albuminuria in 24 hours, β-MG and CysC were decreased significantly in both groups ($t=2.693, t=3.541, t=2.967, t=3.284, t=4.295, t=3.865; P<0.05$). The amplitude of change of Scr, BUN, Ccr, albuminuria in 24 hours,β-MG and CysC were obviously higher in the alprostadil combined with Shenkang treatment group than in the Shenkang treatment group ($t=3.241, t=2.866, t=3.562, t=5.121, t=4.328; P<0.05$).

CONCLUSION: The effect of alprostadil combined with Shenkang injection on kidney function is significantly better than Shenkang injection alone in patients with chronic kidney disease.

P115
Relationship between Serum Adiponectin and Insulin Resistance in Patients with Coronary Heart Disease Complicated by Metabolic Syndrome

X. Y. Lu, Department of Integrative Cardiology, China-Japan Friendship Hospital, Beijing, 100029, China

OBJECTIVE: To investigate the relationship between serum adiponectin levels and insulin resistance (IR) in patients with coronary heart disease (CHD) complicated by metabolic syndrome (MS).

METHODS: Serum adiponectin levels were measured in 17 CHD+MS patients, 16 MS patients and 14 healthy controls using ELISA method. HOMA-IR and Gensini score were calculated.

RESULTS: There was a significant difference in serum levels of adiponectin, HOMA-IR between the controls (28.40±26.19, 1.02±0.15): subjects with MS (15.47±8.06, 1.75±0.98) and subjects with CHD +MS (12.75±3.74, 1.60±0.89) (all $P<0.05$). Multiple stepwise linear regression analysis indicated a statistically significant relationship between serum levels of adiponectin and Gensini score ($P<0.05$). Adiponectin levels in patients with MS were lower compared with the controls and more noticeable in those with CHD +MS. Adiponectin levels in patients with CHD +MS was related significantly with the degree of coronary artery stenosis.

CONCLUSIONS: The results indicate that existence of IR in MS and CHD may aggravate the progress of AS. Adiponectin levels reflect the severity of IR and CHD, which will be beneficial to the diagnosis and prediction.

P116
Risk Factors of Cognitive Impairment in Elderly Patients with Hypertension: a Cross-sectional Study in Chinese Elderly

T. Li¹, J. Bai², J. W. Xiang³, R. Wang⁴, X. P. Tuo², Z. X. Zhao⁵, ¹Department of Endocrinology, Changzheng Hospital, Second Military Medical University, Shanghai 200001, China; ²Department of
BACKGROUND: Hypertension (THN) is a very prevalent public health problem and as the population ages, cognitive impairment (CI) will become an urgent health burden. The aim of this study was to investigate the prevalence of CI of the elderly individuals with HTN and to analyze the related risk factors.

METHODS: At baseline, 200 HTN senior citizens (aged ≥60 years) were enrolled and investigated by the trained physicians. The investigation was given to the subjects one by one to screen the cognitive function with neurophysiological tests including Mini-mental state examination (MMSE) and Clock Drawing Test (CDT) and then to evaluate the candidate factors between CI group and non-CI group.

RESULTS: In HTN, 29.5% individuals had CI (59/200). The univariate analysis showed that age, gender, education duration, alcohol consumption, regular exercises, and poor control of hypertension and type II diabetes were related factors. And the logistic regression analysis showed that age (OR=1.769, 95% CI 1.014-3.087), poor blood-pressure control (OR=2.159, 95% CI 1.358-3.434) and diabetes (OR=3.925, 95% CI 2.070-12.961) were hazard factors for cognitive dysfunction. While education duration (OR=0.145, 95% CI 0.058-0.364) and regular exercises (OR=0.197, 95% CI 0.070-0.555) were protective factors.

CONCLUSION: The elderly with HTN are more likely to have CI and may be subject to many factors. We believe that aging, poorly controlled HTN and Diabetes increase the probability and aggravation of CI. Meanwhile, we recommend the HTN change behaviors such as continuing education and daily exercises to prevent or delay the occurrence of cognitive dysfunction or impairment.

P117
Using Mathematical Algorithms to Modify the CKD-EPI Equation and MacIsaac Equation for the Elderly

X. H. Pei, J. He, B. Zhu, J. Q. Wu, W. H. Zhao, Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu 210029, China

BACKGROUND: Glomerular filtration rate (GFR) estimation equations, a new way to predict GFR, were recommended by clinical guidelines worldwide. However, there is no specific equation for the elderly up to now. Our previous studies indicated the CKD-EPI equation and MacIsaac equation performed the most accurate for the elderly. This study aimed to further modify the two equations.

METHODS: 99mTc-DTPA dynamic renal dynamic imaging method was measured as reference GFR (rGFR). 80% of the subjects were a development set, 20% of the participants as a validation set. Mathematical algorithms, including hill-climbing algorithm and simulated annealing method were adopted to modify the CKD-EPI equation and MacIsaac equation.

RESULTS: A total of 247 elderly Chinese subjects were recruited, aged 60-86 years old, with the average rGFR 62.61±20.81ml/min/1.73m². After modification, bias of the two equations was significantly decreased (CKD-EPI equation: 2.61ml/min/1.73m² decreased to 1.86ml/min/1.73m², P < 0.01). Slope and intercept of...
eGFR from the CKD-EPI and MacIsaac equations became narrowed (slope: 0.23, 0.11 to 0.06, 0.02, intercept: -14.85, -10.15 to -1.30, -2.45). P<0.05 of the two equations increased (CKD-EPI: 80.6% to 85.4%, MacIssac: 83.0% to 88.7%). Synchronously, root mean square error was also improved (CKD-EPI: 0.255 to 0.220, MacIssac: 0.214 to 0.189).

CONCLUSION: Mathematical algorithms could be a useful tool to improve the applicability for the GFR estimation. Accuracy of the two modified equations was significantly increased, in which, the modified MacIsaac equation could be the optimal one for the elderly.

118
Rosiglitazone Improves Cognitive Function in old Rat with Diabetes

J. Li, Q. Q. Sun, Geriatric Medical Center, West China Hospital of Sichuan University, Chengdu, People’s Republic of China

OBJECTIVE: Although the cognitive impairment in geriatric diabetes is common, its mechanisms remain unclear and therapies are limited. The present study aimed to investigate the mechanism of rosiglitazone in the treatment of cognitive impairment in geriatric diabetes.

METHODS: Diabetes was induced by streptozotocin in aged Wistar rats of 20-22 months. Then, the diabetic rats were divided randomly into the diabetic model group (n=12) and rosiglitazone treatment group (n=12) for assessment of cognitive function and cerebral injury at 8 weeks using Morris water maze (MWM) paradigm, real-time PCR and western blot analysis. Similarly aged Wistar rats (n=6) were also assessed as control. In vitro, the therapeutic effect of rosiglitazone was investigated using rat chromaffin cell line PC12 cultured with high glucose and/or rosiglitazone.

RESULTS: Eight weeks after diabetes induction, old rats exhibited marked and persistent hyperglycemia, weight loss, higher level of serum C-reactive protein (CRP), higher escape latency, reduced time spent in target quadrant and the number of crossings over the platform in Morris water maze test. Enhanced cerebral inflammation in old rats with diabetes was associated with over-activation of the nuclear factor κB (NF-κB) signalling pathway and upregulation of inflammatory cytokines (IL-6, TNFα) in the hippocampus (IL-6/GAPDH: diabetic group vs control group 1.38+/−0.16 vs 0.59+/−0.03, P<0.01; TNFα/GAPDH: diabetic group vs control group 0.49+/−0.11 vs 0.17+/−0.06 P<0.05) Compared with the diabetic group, level of serum CRP, inflammatory cytokines (IL-6,GAPDH: diabetic group vs treatment group 1.38+/−0.16 vs 0.94+/−0.05 P<0.05; TNFα/GAPDH: diabetic group vs treatment group 0.49+/−0.11 vs 0.31+/−0.07 P<0.05 ) and over-activation of NF-κB pathway were restored partially concomitant with attenuation of cognitive dysfunction indicated as markedly decreased escape latency and increased time spent in target quadrant during Morris water maze test in the rosiglitazone treatment group. In vitro, high glucose significantly activated NF-κB signalling pathway and upregulated inflammatory cytokines (IL-6/GAPDH: high glucose vs control group 0.73+/−0.26 vs 0.38+/−0.09, P<0.05; TNFα/GAPDH: high glucose vs control group 0.84+/−0.38 vs 0.46+/−0.07, P<0.05, TNFα). CRP synergistically promoted high glucose-mediated effects. (IL-6/GAPDH: high glucose + CRP group vs control group 1.85+/−0.63 vs 0.38+/−0.09, P<0.01; TNFα/GAPDH: high glucose + CRP group vs control group 2.67+/−0.63 vs 0.46+/−0.07, P<0.01). The pathogenic effects mediated by high glucose and/or CRP were ameliorated by rosiglitazone treatment (IL-6/GAPDH: high glucose + CRP group vs high glucose + CRP + rosiglitazone group 1.95+/−0.63 vs 1.35+/−0.34, P<0.05; TNFα/GAPDH: high glucose + CRP group vs control group 2.67+/−0.63 vs 1.78+/−0.36, P<0.05).
CONCLUSION: Enhanced activation of NF-kB signalling pathway and upregulation of inflammatory cytokines (IL-6, TNFα) may be the mechanisms by which CRP promotes cognitive impairment and cerebral injury under diabetic conditions. Rosiglitazone improved the cognitive function in geriatric diabetes. The underlying mechanism is possibly associated with the reduction of serum CRP level, inhibiting the NF-kB signal and decreasing the expressions of inflammatory cytokines (IL-6, TNFα).

P119
Study on the Quality of Life and Social Supports of the Elderly with Different Support Models for the Elderly

J. H. Zhou¹, W. Chang¹, L. X. Huang¹, X. Q. MA², ¹ Zhenxin Community Health Center, Jiading District, Shanghai, 201824, China; ² Department of Health Services, Second Military Medical University, Shanghai, 200433, China

OBJECTIVE: To compare the quality of life, social supports, depression and loneliness of the elderly in different styles of providing services.

METHODS: A set of questionnaires, including general information questionnaire, 36-item Short Form Health Survey, Social Support Rate Scale, Geriatric Depression Scale and Loneliness Scale were sent to 212 empty nest elders in community and 160 aged in nursing home.

RESULTS: The scores on physical function (F=62.63, P < 0.0001), social function (F=9.03, P=0.0028), role-emotional (F=4.37, P=0.0373), subjective support (F=21.98, P < 0.0001), objective support (F=18.81, P < 0.0001), utilization of support and total score of social support (F=18.68, P < 0.0001) of empty nest elders were higher (p<0.05). There were no difference of scores on role-physical (F=0.61, P=0.4361), bodily pain (F=0.04, P=0.8458), general health (F=0.18, P=0.6678), vitality (F=0.60, P=0.4379), mental health (F=0.02, P=0.8813), utilization of support (F=1.31, P=0.2527), depression (F=0.02, P=0.8779), loneliness (F=0.34, P=0.5617) between the two groups. There were difference of scores on role-physical, bodily pain, general health, vitality, mental health, utilization of support, depression, loneliness between the two groups (p>0.05).

<table>
<thead>
<tr>
<th>Subject</th>
<th>Aged in nursing home (n=160)</th>
<th>Empty nest elders in community (n=212)</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical function</td>
<td>32.38±29.56</td>
<td>67.45±22.22</td>
<td>62.63</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Role-physical</td>
<td>45.75±35.60</td>
<td>55.54±24.94</td>
<td>0.61</td>
<td>0.4361</td>
</tr>
<tr>
<td>Bodily pain</td>
<td>64.73±23.44</td>
<td>69.24±21.28</td>
<td>0.04</td>
<td>0.8458</td>
</tr>
<tr>
<td>General health</td>
<td>48.63±20.89</td>
<td>50.68±18.91</td>
<td>0.18</td>
<td>0.6678</td>
</tr>
<tr>
<td>Vitality</td>
<td>57.00±21.05</td>
<td>61.70±18.21</td>
<td>0.60</td>
<td>0.4379</td>
</tr>
<tr>
<td>Social function</td>
<td>50.78±25.46</td>
<td>66.51±22.24</td>
<td>9.03</td>
<td>0.0028</td>
</tr>
<tr>
<td>Role-emotional</td>
<td>51.88±33.40</td>
<td>55.03±32.48</td>
<td>4.37</td>
<td>0.0373</td>
</tr>
<tr>
<td>Mental health</td>
<td>65.95±19.21</td>
<td>69.70±15.89</td>
<td>0.02</td>
<td>0.8813</td>
</tr>
<tr>
<td>Subjective support</td>
<td>15.78±3.70</td>
<td>20.38±3.72</td>
<td>21.98</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Objective support</td>
<td>5.78±1.47</td>
<td>8.72±2.64</td>
<td>18.81</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Utilization of support</td>
<td>5.51±2.17</td>
<td>6.88±5.08</td>
<td>1.31</td>
<td>0.2527</td>
</tr>
<tr>
<td>Total score of social</td>
<td>27.08±5.99</td>
<td>35.53±7.64</td>
<td>18.68</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>
CONCLUSION: Development of comprehensive community providing services for the elderly is better than family taking care services in terms of quality of life and social supports. It should be of concern to the society and family. Both the society and family create a better environment for the improvement of good quality life for the elderly.

P120
Renal Function Decline as a Factor for Predicting CVD Risk in Various Populations

B. Jin¹, X. J. Bai¹, L. L. Han¹, W. G. Zhang², X. M. Chen², ¹ Department of Gerontology and Geriatrics, Shenjing Hospital of China Medical University, Shenyang, China; ² Department of Kidney, General Hospital of Chinese People’s Liberation Army, Beijing, China

BACKGROUND: Chronic kidney disease (CKD) is generally considered an independent risk factor for cardiovascular disease (CVD) development, but rates in individuals with estimated glomerular filtration rate (eGFR) > 60 ml/min/1.73 m² are uncertain. The purpose of this study was to examine the association between eGFR and Framingham global CVD risk score (FRS) in a Chinese population with no CKD or CVD.

METHODS: A total of 333 participants were divided into three groups based on FRS. The Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation and CKD-EPI equation for Asians (CKD-EPI-ASIA) were used to measure eGFR.

RESULTS: A significant inverse association between eGFR and FRS was confirmed with Pearson correlation coefficients of –0.669, –0.698 (eGFR\textsubscript{CKD-EPI}, P < 0.01) and –0.658, –0.690 (eGFR\textsubscript{CKD-EPI-ASIA}, P < 0.01). This association gradually diminished with progression from the low- to high-risk groups (eGFR\textsubscript{CKD-EPI}, r = –0.615, –0.282, –0.197, P < 0.01, P < 0.01, P > 0.05; similar results according to the CKD-EPI-ASIA equation). In the low- or moderate-risk new-groups, this association became stronger with increased FRS (eGFR\textsubscript{CKD-EPI-ASIA}, r = –0.557, –0.622 or –0.326, –0.329, P < 0.01). In contrast to the results from 2008, eGFR was independently associated with FRS following adjustment for traditional cardiovascular risk factors (P < 0.05).

CONCLUSION: Renal function has a different effect on predicting CVD risk in various populations. With increasing FRS and decreasing eGFR, it is also independently associated with CVD, even in individuals with eGFR > 60 ml/min/1.73 m².

P121
Effects of Gender Difference on Cognition and its Risk Factors in ‘Empty-Nesters’ Healthy Chinese Population above 60 Years Old

L. L. Han¹, X. J. Bai¹, K. Yu¹, B. Jin¹, W. Han¹, X. M. Chen², ¹Departments of Gerontology and Geriatrics, Shengjing Affiliated Hospital of China Medical University, Shenyang; ²Department of
OBJECTIVE: The aim of this study was to estimate the differences of cognition and risk factors of cognition decline between empty-nest and non-empty-nest elderly in healthy Chinese population.

METHODS: In cross-sectional study, we examined 475 healthy elderly (aged 60–91 years, 235 men) with no cardiocerebral disease and diabetes mellitus. Participants were categorized into non-empty-nest and empty-nest group. The Mini-Mental State Examination (MMSE) was performed as an assessment of cognition. Carotid intima-media thickness (CIMT) was analyzed using M-mode ultrasonography.

RESULTS: MMSE score of empty-nest group (25.93±3.88) was significantly lower than non-empty-nest group (27.20±2.48, p=0.002) only for males. There were no significant difference between female groups (26.25±3.39 vs. 26.07±3.617, p=.695). Stepwise multiple regression equation analysis in males showed that age and fasting blood glucose (FBG) are independently associated with MMSE in both non-empty-nest (B=-0.224~0.107 p<.001 for age and B=-1.375~0.175 p=.013 for FBG ) (B=-0.166 p<0.001 for age and B=-0.78 p=0.013 for FBG ) and empty-nest(B=-0.347~0.143 p<.001 for age and B=-2.651~0.427 p=.007 for FBG ) group. and empty-nest(B=-0.245 p<0.001 for age and B=-1.539 p=0.007 for FBG ) group. However, in non-empty-nest females, the age (B=0.223~0.065 p<.001), systolic blood pressure (SBP, B=-0.160~0.044 p=.001), and diastolic blood pressure (DBP, B=0.043~0.195 p=.003) were independently correlated with MMSE. In empty-nest females, only the age (B=0.282~0.058 p=.005) and estimated glomerular filtration rate (eGFR, B=0.063~0.007 p=.019) were independently correlated with MMSE. (B=-0.147 p<0.001), systolic blood pressure (SBP, B=-0.102 p=0.001), and diastolic blood pressure (DBP, B=0.117 p=0.003) were independently correlated with MMSE. In empty-nest females, only the age (B=0.168 p=.005) and estimated glomerular filtration rate (eGFR, B=-0.028 p=0.019) were independently correlated with MMSE.

CONCLUSION: The cognition of empty-nest males was lower than non-empty males. There are gender differences of risk factors for cognition decline between empty-nest and not-empty-nest healthy Chinese elderly population. Empty-nest females should pay more attention to faster aging-related decline of the cognition.

P122
Associations of Frailty and Functional Status in Elderly Patients with Type 2 Diabetes

Y. Li, S. Wang, Dong BR, the Center of Gerontology and Geriatrics, West China Hospital, Sichuan University, Sichuan, 610000 China

BACKGROUND: Frailty and diabetes are common among older people. The objective of this study was to investigate the relationship between frailty and functional status in elderly patients with type 2 diabetes in Southwest China.

METHODS: The study was a cross-sectional study of 151 type 2 diabetes mellitus patients aged≥60 years. Frailty was assessed with FRAIL scale (Fatigue, Resistance, Ambulation, Illnesses and Loss of weight). FRAIL scale scores range from 0-5 (1 point for each component) and represent frail (3-5), pre-frail (1-2), and healthy (0). Mini-Mental Status Exam (MMSE) was used to assess cognitive function. Functional status was determined by activities of daily living (ADLs), instrumental activities of daily living (IADLs) and Timed ‘ Up and Go’ Test (TUG).
**RESULTS:** Of the total 151 patients (median age 80 (IQR:74-84) years, 77.5% female), 36.4% were pre-frail and 17.2% were frail. There was no significant HbA1c difference between frailty categories. Frail patients had worse cognitive function than healthy or pre-frail patients. After adjusting for age, gender and cognitive function, both being frail and pre-frail were significantly associated with more IADL difficulties, ADL difficulties and TUG inability.

**CONCLUSION:** Frailty according to FRAIL scale was related to functional status in geriatric patients with type 2 diabetes.

**P123**
Aging-Related Changes in Bone Mineral Density and its Association with Subclinical Atherosclerosis Biomarkers in Healthy Population in China

X. J. Bai¹, D. K. Liang², L. L. Han¹, X. Zhao¹, K. Yu¹, B. Jin¹, X. M. Chen³, ¹ Departments of Gerotology and Geriatrics, Shengjing Affiliated Hospital of China Medical University, Shenyang; ²Department of Gerontology and Geriatrics, First Affiliated Hospital of China Medical University, Shenyang; ³Department of Kidney, General Hospital of Chinese PLA, Beijing, China

**OBJECTIVE:** Both osteoporosis and atherosclerosis-related disease are common in the elderly. The aim of this study was to examine changes of bone mineral density (BMD) with age and its association with subclinical atherosclerosis biomarkers in healthy population in China.

**METHODS:** 505 qualified healthy subjects were screened from 1500 participants from fifteen communities in Shenyang between September 2007 and June 2008. The BMD was measured at the total hip and lumbar spine using dual-energy x-ray absorptiometry and categorized into the normal BMD (T score > -1.0), osteopenia (-1.0 < T score < -2.5), or osteoporosis (T score < -2.5) groups. The ABI, PWV, and CIMT were measured to assess subclinical atherosclerosis.

**RESULTS:** In women, the lumbar BMD (r=-0.587, p<0.001) and total hip BMD (r=-0.575, p<0.001) were significantly correlated with age. However, in men, only total hip BMD was significantly correlated with age (r=-0.251, p<0.001). Total hip BMD was correlated with ABI in women after adjustment for age (r=-0.156, per SD decrease in ABI: -0.130 g/cm², p=0.022), and was borderline significant after full adjustment (p=0.045). Total hip BMD and lumbar spine BMD were not associated with ABI, PWV, and CIMT after full adjustment in participants without a fracture history. The risk of osteoporosis was not associated with ABI, PWV, and CIMT.

**CONCLUSION:** Changes of BMD with aging were different between women and men. The associations between low BMD and subclinical atherosclerosis biomarkers may depend on aging, blood pressure and internal environment.

**P124**
Retrospective Study of Continuous Renal Replacement Therapy (CRRT) in the Elderly Patients with Acute Kidney Injury (AKI)

S. Liu, Q. L. Cheng, X. Y. Zhang, Q. Ma, J. H. Zhao, R. Pan, X. Y. Cai, Department of Geriatric Nephrology, Chinese PLA General Hospital, Beijing, 100853, China
OBJECTIVE: To analyze the risk factors for the prognosis of CRRT in the elderly patients with AKI.

METHODS: The clinical data of the patients who met the 2012 Kdigo AKI criteria and were performed bedside CRRT in our department from Jan. 2001 to Dec. 2010 were collected and analyzed retrospectively in this study. APACHE II score and mortality risk coefficient were calculated to evaluate the severity of the disease.

RESULTS: 41 critically-ill elderly patients (37 males and 4 females) were enrolled. The patients were 80 to 100 years old in age, with an average (88.65±4.76). The average of APACHE II score was (27.8±5.6) points and the risk coefficient was 0.80±0.10 in those patients. The actual mortality rate was 60.97%. The APACHE II scores of the death group were significantly higher than that of the survival group (32.36±2.83 vs 26.25±3.46, (P<0.05). APACHE II score was the important reference index of CRRT starting, and it also could predict the risk of death. Logistic regression analysis showed that multiple organ dysfunction, APACHE II score. Using mechanical ventilation and hypoalbuminemia were the major risk factors of the outcome in those patients.

CONCLUSION: The outcome of the critically-ill elderly patients with CRRT was related to multiple organ dysfunction, APACHE II score, mechanical ventilation, and hypoalbuminemia.

P125

Diagnostic Accuracy of Serum Cystatin C in Chronic Kidney Disease ---- a Meta-analysis

L. Wei, X. S. Ye, W. H. Zhao, Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu 210029, China

BACKGROUND: Much attention has been paid to the use of serum cystatin C (sCysC) in research studies. In clinical practice, sCysC has been certified as a good endogenous filtration maker to replace serum creatinine-based diagnosis of chronic kidney disease (CKD). This study was performed to study the diagnostic accuracy of sCysC in healthy population and to compare the performance of sCysC in different patients, such as the patients with diabetes and non-diabetes.

METHODS: Patients with CKD in various clinical setting were included. Relevant articles were identified potentially through computerized search of PubMed from inception until May 2, 2014. Inclusion criteria were studies investigating the diagnostic accuracy of sCysC level to predict CKD. Glomerular filtration rate was measured by Inulin clearance or nuclear medicine techniques such as 99Tc DTPA or 51Cr EDTA or estimated by MDRD or CG formula.

RESULTS: We analyzed data from 21 studies, and 15 of these studies could be included in this meta-analysis. Across all settings, sCysC had a higher diagnostic accuracy of CKD compared with serum creatinine. Subgroup analysis showed that the performance of sCysC was better in European and American populations with sensitivity and specificity of 0.9 (95%CI, 0.55-1.00) and 0.9 (95%CI, 0.76-0.97). Besides, the immunoturbidimetric method seemed to be more adequate to measure sCysC than immunonephelometric method to predict GFR and diagnosis of CKD (sensitivity 0.76 vs 0.66, specificity 0.97 vs 1.00).

CONCLUSION: sCysC appears to be a good biomarker in the diagnostic of CKD, especially in European and American populations and patients with diabetes.
Creatinine-and/or Cystatin C-based Equations for Predicting Glomerular Filtration Rate in Chinese Elderly ---- A Disparity in Renal Function Estimation

X. S. Ye, L. Wei, X. H. Pei, B. Zhu, J. Q. Wu, W. H. Zhao, Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu 210029, China

BACKGROUND: The aim of this study was to evaluate the performance of some frequently used or recently described glomerular filtration rate (GFR) estimating equations based on creatinine or/and cystatin C in the Chinese elderly.

METHODS: The equations were validated in totally 419 participants. The estimated GFRs (eGFRs) were compared with the reference GFR (rGFR) measured by the $^{99m}$Tc-DTPA renal dynamic imaging method.

RESULTS: Median serum creatinine, cystatin C and rGFR were 0.93mg/L, 1.13mg/L and 74.20mL/min/1.73m$^2$, respectively. The Chinese population derived creatinine- and cystatin C-based (Cscr-cys) equations yielded the lowest median absolute difference (8.81, p<0.05 versus CKD-EPIscr equation), highest $P_{15}, P_{30}$ (55.13 and 85.44, p<0.05 and p<0.01 versus CKD-EPIscr equation) and least RMSE (14.87 versus a range from 15.30-22.45) in the whole cohort. Substantial agreement of diagnostic consistency between eGFR and rGFR (with a kappa 0.61-0.80) was also observed with the Cscr-cys equation. Moreover, measures of performance in Cscr-cys equation were consistent across normal-mildly injured GFR strata, age ≤ 80-year old individuals. Among all the creatinine- or cystatin C-based alone equations, Chinese elderly developed creatinine-based (CEscr) equation performed only inferior to the Cscr-cys equation. Nevertheless, none of the equations achieved ideal manifestation in the moderately-severely GFR-injured or in the 80-year or older individuals.

CONCLUSION: Cscr-cys equation appeared to be optimal in the Chinese elderly at present. In cases absent of cystatin C, CEscr equation could be recommended. A multi-center study with a large sample size to develop apposite formula for the Chinese elderly will be essential.

Influence of Erythropoietin on Microvesicles Derived from Mesenchymal Stem Cells Protecting Renal Function of Chronic Kidney Disease

Y. Wang, X. Y. Lu, J. He, W. H. Zhao, Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu 210029, China

BACKGROUND: Mesenchymal stem cells (MSCs) play a central role in mediating cell and tissue damage. Erythropoietin (EPO) can stimulate the proliferation and protraction of marrow-derived mesenchymal stem cells (mMSCs) under the renal injury microenvironment. Recent researches showed micro-vesicles (MVs) from MSCs contribute to recovery of damaged kidney. In the present study, the role of EPO on the MV derived from MSC and further protective effect of chronic kidney disease were investigated.
METHODS: mMSCs from C57 mouse were isolated and cultured. MV from different concentrations of EPO(0, 5, 10, 50, 100, 500 IU/mL) incubated MSC were used to treat unilateral ureteral obstruction (UUO) model induced renal injury and transforming growth factor-β1 (TGF-β1) induced HK2 cells fibrosis. Western blot and RT-PCR were used to evaluate the expression of epithelial and mesenchymal markers. Flow cytometry were used to study HK2 apoptosis. The miRCURY™ Hy3™/Hy5™ Power labeling kit and hybridized on the miRCURY™ LNA Array were used to determine the expression profile of miRNA in MV and EPO-MV.

RESULTS: The concentrations of MVs derived from MSCs can be raised within a certain range of EPO (5-100 IU/ml). EPO-MV showed better anti-injury effect in unilateral ureteral obstruction that caused mice chronic kidney disease in 7 days and 14 days than MV alone. For the researches in vitro, TGF-β1-induced fibrosis in HK2 cells could be better restored by EPO-MV in 48 hours and 72 hours. Flow cytometry results revealed that MVs, especially EPO-MVs could play an important role in the anti-apoptosis of HK2 cells treated with TGF-β1. Analysis of miRNA profiles revealed that EPO-MVs showed differences in 212 miRNAs compared to MVs (Fold Change>=1.5), 70.28% changed miRNAs were upregulated, such as miR-299, miR-499, miR-302, miRNA-200 and so on, which might contribute to the better protective effect in renal injury of EPO-MV.

CONCLUSION: The concentrations of MVs derived from MSCs showed a significant dose-dependent manner within a certain range of EPO incubation. Both MV and EPO-MV could protect kidney from the damage of fibrosis.

P128
The Incidence and Risk Factors of Acute Kidney Injury in the Very Elderly Patients with Mechanical Ventilation

Q. L. Li, Q. L. Cheng, Q. G. Ao, Q. MA, J. H. Zhao, J. Du, S. Liu, X. Y. Zhang, Department of Geriatric Nephrology, Chinese PLA General Hospital, Beijing, China

OBJECTIVE: To explore the incidence, pathogenetic and risk factors of acute kidney injury (AKI) in the very elderly patients with mechanical ventilation (MV).

METHODS: A total of 260 elderly patients with MV in the geriatric department of Chinese PLA General Hospital from January 2008 to December 2012 were enrolled. Their clinical data were analyzed to explore the incidence and risk factors of acute kidney injury (AKI) in the very elderly patients after MV.

RESULTS: The average age of the patients was (88.9±5) years. 125 cases (48.1%) suffered from AKI which emerged at a mean time of (1.6±0.7) days after MV. The history of chronic kidney disease (CKD, 66.4% vs 51.1%, \( P=0.012 \)) and diabetes (51.2% vs 38.5%, \( P=0.040 \)) in the patients with AKI (AKI group) were higher than that in the patients without AKI (Non-AKI group). Compared with the Non-AKI group, lower level of PaO\(_2\) (59.7±12.8 vs 63.6±14.1, \( P=0.031 \)), lower level of oxygen index (PaO\(_2\)/FiO\(_2\), 122.5±42 vs 145.7±46, \( P=0.000 \)), higher level of hemoglobin (105±23 vs 100±17, \( P=0.046 \)) and hyperglycemic (10.2±4.1 vs 8.8±3.7, \( P=0.004 \)) were found in AKI group. The incidence of AKI was higher when the patients using higher level of positive end-expiratory pressure (PEEP)≥4cmH\(_2\)O. Logistic regression analysis showed that the history of CKD (OR=1.964), hyperglycemia (OR=1.076), the lower level of PaO\(_2\)/FiO\(_2\) (OR=2.142) and using higher level of PEEP (≥4cmH\(_2\)O, OR=0.990) were the risk factors of the prognosis of AKI in those patients with MV (\( P<0.05 \)).
CONCLUSIONS: The incidence of AKI in the very elderly patients with MV was 48.1%. The history of CKD, hyperglycemia, low level of PaO\textsubscript{2}/FiO\textsubscript{2} and using higher level of PEEP (≥4cmH\textsubscript{2}O) were the risk factors of AKI in the very elderly patients with MV.

P129

A Survey of Mental Health Condition in the Very Elderly Community-dwelling Male Subjects with Chronic Kidney Disease

X. Liu, Q. L. Cheng, Q. L. Li, R. Q. Zhang, Z. Y. Wang, C. G. Xing, Department of Geriatric Nephrology, Chinese PLA General Hospital, Beijing, 100853, China

OBJECTIVE: To investigate the prevalence of chronic kidney disease (CKD) in the very elderly community-dwelling subjects, and to evaluate their nutritional and mental health status.

METHODS: A stratified cluster random sampling method was used in this study comprising 436 men aged 80 years above from 6 communities in Feng-tai District, Beijing City. After screening the subjects with CKD, the risk of malnutrition was assessed by the Mini Nutritional Assessment-Short Form (MNA-SF) combined with anthropometric measurements and biochemical markers, and the mental health condition was measured by the Hopkins Symptoms Check List-10 (HSCL-10).

RESULTS: ① The prevalence of CKD in the very elderly was 37.8% in this study. ② According to the MNA-SF score, 8.5% of those patients were malnourished, 24.8% were at the risk of malnutrition, and 66.7% were well nourished. From CKD stage 1 to stage 5, the prevalence of malnutrition and at the risk of malnutrition was 15.8%, 25.8%, 31.1%, 64.3%, and 100%, respectively. ③ With the progression of CKD, the HSCL-10 score was increasing.

CONCLUSION: The prevalence of CKD in the very elderly community-dwelling male subjects was 37.8%. About 44.8% of patients stayed in the CKD stage 3. With the progression of CKD, the nutritional condition was decreasing and the depression and anxiety symptom was getting worse in the aged patients.

P130

Early Renal Changes in Diabetic Rats and the Protective Effects of Traditional Chinese Medicine Shenkang Injection

Y. Liu, Q. L. Cheng, Q. L. Li, Q. MA, J. H. Zhao, S. Liu. Department of Geriatric Nephrology, Chinese PLA General Hospital, Beijing, 100853, China

OBJECTIVE: This study aimed to investigate the pathophysiological changes, toll-like receptor 4 (TLR4) expression and ED-1+ cells in early stage of diabetic rats and to explore the protective effects of Traditional Chinese Medicine Shenkang Injection.

METHODS: Thirty SD rats were divided into normal control group (NC), diabetic group (DM) and DM+shenkang group (DMSK) randomly. The type 2 diabetic rat models were induced by high-sugar, high-fat diet and low-dose intraperitoneal injection of streptozotocin. The insulin resistance was evaluated using hyperinsulinemic-euglycemic clamp test (HECT). Intervention of Traditional Chinese Medicine Shenkang Injection was given by intraperitoneal injection for 8 weeks. The general state,
body weight (BW), kidney index (KI), blood glucose (Glu), serum creatinine (Scr), blood urea nitrogen (BUN), triglycerides (TG), total cholesterol (TC), microalbuminuria (mALB), urinary NAG enzyme and HECT were recorded. Renal pathological changes were observed by PAS staining, and the expression of TLR4 and the renal interstitial ED-1+ cells in the kidney tissue was detected using immunohistochemical method.

**RESULTS**: After 8 weeks of Intervention with Shenkang Injection, the general state of those rats was improved in the DMSK group. The levels of Glu, mALB, urinary NAG level, KI, glomerular volume and tubular score in the DMSK group were improved significantly than those of the DM group respectively (P <0.01). Meanwhile, the expression of TLR4 and renal interstitial ED-1+ cells in DMSK group significantly decreased than that of DM group respectively (P <0.01). Insulin resistance was also significantly improved in DMSK group. The data are shown in the following table.

<table>
<thead>
<tr>
<th>Groups</th>
<th>KI</th>
<th>Glu</th>
<th>mALB</th>
<th>nNAG</th>
<th>GIR</th>
<th>Gv</th>
<th>Tubular Lesion</th>
<th>TLR4</th>
<th>ED-1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g/d</td>
<td>mmol/L</td>
<td>mg/dl</td>
<td>mg/dl</td>
<td>U/L</td>
<td>g/l</td>
<td>cm²</td>
<td>IOD</td>
<td>PCC</td>
</tr>
<tr>
<td>DM</td>
<td>40 ± 0.14</td>
<td>22.3 ± 2.45</td>
<td>39.7 ± 1.06</td>
<td>56.5 ± 11.06</td>
<td>7.61 ± 0.72</td>
<td>1.25 ± 0.12</td>
<td>294 ± 25.34</td>
<td>1.72 ± 2.45</td>
<td>8.79 ± 0.79</td>
</tr>
<tr>
<td>DMSK</td>
<td>40 ± 0.05</td>
<td>20.64 ± 1.39</td>
<td>31.11 ± 2.63</td>
<td>31.34 ± 5.14</td>
<td>12.18 ± 2.25</td>
<td>0.64 ± 0.08</td>
<td>153 ± 4.71</td>
<td>1.72 ± 3.39</td>
<td>8.78 ± 1.41</td>
</tr>
<tr>
<td>NC</td>
<td>40 ± 0.64</td>
<td>5.03 ± 0.52</td>
<td>11.33 ± 2.38</td>
<td>8.56 ± 0.27</td>
<td>23.21 ± 1.67</td>
<td>0.92 ± 0.09</td>
<td>1.10 ± 0.78</td>
<td>207 ± 6.22</td>
<td>1.23 ± 0.52</td>
</tr>
</tbody>
</table>

**CONCLUSION**: Early renal changes in diabetic rats may include glomerular volume increase, tubular vacuolar degeneration, and may increase the expression of TLR4 in the renal tissue and renal interstitial macrophage infiltration. Traditional Chinese Medicine Shenkang Injection could attenuate diabetic tubulointerstitial damage and delay the progression of diabetic nephropathy, which may be associated with the reduced expression of TLR4 and the inhibition of inflammation-mediated macrophage infiltration.

**P131**

Erythropoietin Treatment Enhances Inhibitory Effects of Mesenchymal Stem Cell against TGF-β1-induced Epithelial-to-Mesenchymal Transition in HK-2 Cells

X. Y. Lu, Y. Wang, J. He, W. H. Zhao, Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu, China

**AIMS**: This study was to evaluate the effects of EPO pretreated on the immunophenotype and differentiation, proliferation, migration of mesenchymal stem cells (MSCs) and to investigate whether or not EPO pretreatment on MSCs could better reverse EMT of HK-2 induced by TGF-β1.

**METHODS**: The murine derived MSCs were isolated, cultured by whole bone marrow method with normal medium or EPO added. Immunophenotype, differentiation assays, CCK proliferation assay, migration assay were performed. The groups were: ① HK-2; ② HK-2+TGF-β1 (6ng/m); ③ HK-2+TGF-β1 (6ng/m) +MSCs (10⁵ cells/200ul); ④ HK-2+TGF-β1 (6ng/ml) + EPO (100IU/ml) pretreated MSCs (10⁵/200ul). They were cultured for 48h, and the expression of a-SMA, E-cadherin in HK-2 was analyzed by RT-PCR and WB, respectively.

**RESULTS**: ① With 100IU/ml EPO for the treatment, the immunophenotypic feature of MSCs didn’t
change, which was still positive for CD105 (98.87%), negative for CD45 (0.12%).

② The adipogenic and osteogenic capacity had not changed after 100 IU/ml EPO treatment. ③ CCK8 assays showed that the absorbance in different concentration of EPO (0, 1, 10, 100, 500 IU/ml) were 0.230±0.030, 0.301±0.012, 0.343±0.038, 0.348±0.029, 0.306±0.027 respectively, which suggested the efficiency of EPO on MSCs proliferation increased gradually in a concentration-dependent manner with increasing concentration of EPO, and the ability peaked at a concentration of 100 IU/ml. The proliferation of 500 IU/ml EPO treated group was inhibited to some extent. ④ After different concentration of EPO (0, 1, 10, 100, 500 IU/ml) treated with MSCs for 8 hours, the average number of migrating cells were 18.67±3.06, 22.20±3.56, 26.00±2.55, 34.80±5.80, 33.40±3.44 cells/HP. The EPO treatment increased the number of migrating MSCs in a concentration-dependent manner up to 100 IU/ml. Furthermore, increase of the concentration of EPO (500 IU/ml) did not show a greater effect in the migratory. ⑤ Compared to the normal group, the mRNA and the protein of α-SMA was significantly increased \((P<0.05)\) with the E-Cadherin significant reduction \((P<0.05)\) in TGF-β1 induced group. Compared to TGF-β1 induced group, the mRNA and the protein of α-SMA and E-Cadherin were separately increased and reduced in both traditional MSC group and EPO pretreated MSC group \((P<0.05)\). Furthermore, EPO pretreated MSC group showed a stronger protective effect than the traditional one in HK-2 cells induced by TGF-β1.

CONCLUSION: EPO pretreated MSCs still had MSCs biological properties. Some proper concentration of EPO treated could increase the proliferation and migration of MSCs. Meanwhile, EPO pretreatment could enhance the inhibitory effects of MSCs against in HK-2 cells induced by TGF-β1.

P132
Using Mathematical Algorithms to Modify Glomerular Filtration Rate Equations for the Chinese Elderly

X. H. Pei, J. He, B. Zhu, J. Q. Wu, W. H. Zhao, Department of Geriatrics, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu 210029, China

BACKGROUND: Glomerular filtration rate (GFR) estimation equations were recommended by clinical guidelines worldwide. However, there is so far no specific equation for the elderly. Our previous studies indicated that the CKD-EPI equation and MacIsaac equation was performed relatively accurate. This study aimed to modify the two equations above to further improve the accuracy for the elderly.

METHODS: Mathematical algorithms were adopted to modify the CKD-EPI equation and MacIsaac equation. 80% of the subjects were set as a training group, the rest of 20% as a validation group. Slope, intercept, root mean square error (RMSE), and the proportion of estimated GFR (eGFR) within 30% deviation of rGFR \((P_{30})\) were used to assess the modification efficiency.

RESULTS: A total of 247 elderly Chinese subjects were recruited, aged 60-86 years old (mean 69.64 ± 6.79 years), with the average rGFR 62.61±20.81 ml/min/1.73m². After modification, bias of the two equations was significantly decreased, with CKD-EPI equation from 2.61 ml/min/1.73m² decreasing to 1.86 ml/min/1.73m², MacIsaac equation from -3.29 ml/min/1.73m² to -0.99 ml/min/1.73m², \(P < 0.01\). Slope and intercept of eGFR from the CKD-EPI and MacIsaac equations became narrowed, with slope: 0.23, 0.11 to 0.06, 0.02, intercept: -14.85, -10.15 to -1.30, -2.45. \(P_{30}\) of the two equations increased (CKD-EPI: 80.6% to 85.4%, MacIsaac: 83.0% to 88.7%). Synchronously, RMSE was also improved (CKD-EPI: 0.255 to 0.220, MacIsaac: 0.214 to 0.189).
CONCLUSION: Accuracy of the two modified equations was significantly increased, in which, the modified MacIsaac equation could be more suitable for the elderly.

P133
Correlation between Health Literacy and Health Status in Nursing Homes

Y. B. Liu, Y. R. Wang, Y. L. Chen, Q. Q. Chu, H. Yao, L. Liu, Y. F. Li, School of Nursing, Xinjiang Medical University, Urumuqi, 830000, China

OBJECTIVE: To investigate the correlation between health literacy and health status in nursing homes.

METHODS: From September 2011 to June 2012, a cluster sampling method was used to investigate the elderly people from nursing homes of Urumuqi, Changji, Shihezi, Karamay. A total of 1396 elderly people were interviewed. Three instruments were used to measure the study's variables. They included the health literacy questionnaire which was developed by Chinese Health Education Center, the SF-36 (Short Form 36 Health Survey Questionnaire), the ADL (Activity of Daily Living Scale), the self-designed sociodemographic questionnaire.

RESULTS: (1) The health literacy scores (71.74±28.35) was very low. The health status scores (physical health were 52.57±10.70, mental health were 52.20±8.19) were intermediate-level. ADL were 23.67±9.27, and the functional lesion of activities of daily living in elderly people was about 52.29%. They were dependent in different degrees. (2) Canonical correlation analysis showed that correlation coefficient between health literacy and health status was 0.308. The correlation became larger in the respect of health attitudes, health behavior and physical health, ADL. Health attitudes and health behavior had positive correlation with and physical health, and had negative correlation with ADL.

CONCLUSIONS: The emphases and contents of health literacy intervention should be focused on health attitudes, health behavior. Through the intervention, we can improve the health status and ADL by increasing health literacy. The elderly people’s health condition and life quality were enhanced gradually.

P134
Vitamin D Binding Protein Modified the Correlation between 25(OH)D and Frailty in the Elderly

Y. S. Liu, Y. Wang, Y. J. Wang, J. K. Zhan, Z. J. Jian, Geriatric Department of the Second Xiang-Ya Hospital, Institute of Aging and Geriatric, Central South University, Changsha, 410011, China

BACKGROUND: Vitamin D binding protein (DBP) may alter the biologic activity of 25-hydroxyvitamin D [25(OH)D]. The objective of present study was to determine the joint effect of serum 25 (OH) D and DBP on the risk of frailty.

METHORDS: Five hundred and sixteen male participants aged 70 years or older were recruited in Changsha city and its surrounding area in Hunan province of China. Frailty was defined as the presence of at least three of the five following criteria: weakness, low physical activity, slowed walking speed,
exhaustion, and weight loss. Multivariate linear regression analysis was performed to assess the relationship between 25(OH) D and DBP levels. Odds ratios (ORs) for frailty were evaluated across quartiles of 25(OH) D and DBP levels, adjusted age, education, and body mass index.

**RESULTS:** The results showed that participants in the lowest quartile of 25(OH) D and the highest, the lowest quartile of DBP levels, and those in the lowest quartile of DBP and the lower quartile of 25(OH)D, had significantly higher OR of being frail compared with those in the highest quartile of 25(OH)D and lowest quartile of DBP, with OR of 3.18 (95% CI: 1.46-4.56, p < 0.05), 2.63 (95% CI: 1.31-3.68, p < 0.01), and 2.52 (95% CI: 1.22-3.52, p < 0.05) respectively.

**CONCLUSION:** The results indicate that the joint effect of serum 25(OH)D and DBP levels is associated with the risk of frailty, and serum DBP levels affects 25(OH)D-frailty relationship in the elderly.

---

**P135**

**High-salt Diet Decreases ACE2 and Activates TGF-β1/Smads Signaling Pathway in Vascular Remodeling in Rats**

C. Liu, Q. H. Shang, Institute of Clinical Medicine, Institute of Cardiovascular Disease and Hypertension Research Lab, Department of Cardiology of Affiliated Hospital, Zunyi Medical College, Guizhou 563000, China

**OBJECTIVE:** Angiotensin-converting enzyme 2(ACE2) has been reported to be protective effect of vascular injury in hypertension, but the mechanism remains unclear. This study aimed to focus on the effects of ACE2 on vascular remodeling and to determine whether or not these effects of ACE2 were dependent upon the TGF-β1/Smads signaling pathway.

**METHODS:** Male Wistar rats (3-4 weeks of age) were given an 4% high salt diet (HSD; n=34) for 24 weeks, whereas their age-matched controls (n=10) received normal salt diet (NS; 0.5% NaCl). In a subgroup of HSD rats (n=10), telmisartan was given at a dose of 30mg/kg per day by gastric gavage. The media thickness and collagen deposition of aorta were observed by HE and Masson staining, respectively. The protein expression of ACE, ACE2, TGF-β1, p-Smad2/3 and Smad7 in aorta were quantified by Western blotting.

**RESULTS:** After 24 weeks, HSD caused hypertension [(138.9±6.8) VS (107.8±7.6)mmHg, p<.05]. HE and Masson staining showed that high-salt diet increased media thickness [(170.2±21.4)μm, p<.05] and collagen deposition of aorta [(28.6±4.46)VS (9.22±2.98)%], p<.05 as compared with NS group. Compared with NS group, the protein levels of TGF-β1[(0.71±0.05) VS (0.51±0.15), p<.05] and p-Smad2/3 [(0.72±0.13) VS (0.47±0.06), p<.05] were increased and Smad7 decreased in HSD group 0.47±0.08 VS (0.58±0.09, p<0.05). Exposure to high salt intake increased ACE protein level (0.6±0.06) VS (0.34±0.07), p<0.05), but decreased vascular ACE2 protein level (0.37±0.08) VS (0.53±0.14), p<0.05). Compared with HSD group, telmisartan improved vascular remodeling induced by high-salt diet, increased ACE2 [(0.51±0.09)VS(0.37±0.08), p<.05] and Smad7 [(0.53±0.07)VS (0.47±0.08), p<.05] protein expression and decreased ACE [(0.49±0.08) VS (0.60±0.06), p<.05], TGF-β1[(0.54±0.10)VS (0.71±0.05), p<.05], TGF-β1 and p-Smad2/3 [(0.63±0.09) VS (0.72±0.13),p<.05] protein levels.

**CONCLUSIONS:** The study suggests that the adverse vascular effects of excessive salt intake may result from the activation of TGF-β1/Smads and the decrease of ACE2. The beneficial effect of
telmisartan may be attributed, at least in part, to the increase of ACE2 expression and inactivation of vascular TGF-β1/Smads.

P136
Clinical Evaluation of Recombinant Human Brain Natriuretic Peptide (rhBNP) Combined with Sodium Nitroprusside to Treat Acute Heart Failure

Y. Song, M. Guo, Y. Q. Zhang, H. Q. Liang, Z. Jia, S. G. Tian, Department of Cardiac Care Unit, TEDIA International Cardiovascular Hospital; Cardiovascular Clinical Institute of Tianjin Medical University Tianjin, TEDIA International Cardiovascular Hospital, Tianjin, China

BACKGROUND: The efficacy and safety of recombinant human brain natriuretic peptide (rh-BNP) administered in combination with sodium nitroprusside, compared with standard sodium nitroprusside treatment, was investigated in patients with acute decompensated heart failure (ADHF).

METHODS: Inpatients (n=200) with New York Heart Association class III-IV ADHF were randomly and evenly divided into two groups: test (rh-BNP plus sodium nitroprusside) and control (sodium nitroprusside). Hemodynamics, symptoms, adverse events, and brain natriuretic peptide (BNP) concentration were recorded before and after drug administration. P-values less than 0.05 (two-tailed) were considered statistically significant.

RESULTS: Mean respiratory rate (bpm,17.19± 5.30 vs.25.96± 4.30; 12.16± 2.8 vs.15.07± 5.49; 10.32± 1.33 vs.12.05± 3.27, all P<.05), heart rate (bpm,90.17±17.73 vs.118.45±17.79; 81.15±9.93 vs.86.81±12.34; 81.17±8.55 vs.85.63±9.15, all P<.05), pulmonary capillary wedge pressure (mmHg,19.09±3.33 vs.24.62±5.15; 18.74±3.73 vs.20.86±3.06, 17.06±1.87 vs.19.31±2.44, all P<.05), and cardiac output (L/min,3.57±0.53 vs.3.15±0.40; 3.90±0.52 vs.3.44±0.40; 4.25±0.60 vs.3.69±0.44, all P<.05) were significantly different between groups at 1 h, 2 h, and 4 h after drug administration. Total urine volume significantly differed between groups in the first 24 h (L/min,3.57±0.53 vs.3.15±0.40; 3.90±0.52 vs.3.44±0.40; 4.25±0.60 vs.3.69±0.44, all P<.05). After 48 h, left ventricular ejection fraction (LVEF) increased in both groups (%.,29.50±6.06 vs.34.58±3.55, P<.05; 30.19±4.33 vs.32.15±3.57, P=.002), and BNP concentration decreased in both groups (pg/ml,1240.51±524.09 vs.665.35±428.42, P<.05, 1262.03±527.15 vs.895.12±416.33, P<.05); however, the magnitudes of change were greater in the test group (LVEF(%): 34.58±3.55 vs.32.15±3.57, P<.05, BNP(pg/ml):665.35±428.42 vs.895.12±416.33, P=.001).

CONCLUSION: In the treatment of ADHF, rh-BNP combined with sodium nitroprusside resulted in greater and earlier improvements in hemodynamic parameters than did sodium nitroprusside alone. The combination was safe and well tolerated. Increased urine volume, reduced BNP concentration, and improvement of symptoms and LVEF were observed.

P137
Revised Assessment Criteria for Prostigmine Test of Myasthenia Gravis

D. T. Peng, Z. H. Wang, X. H. Zhang, X. H. Xu, 1 Department of Neurology, China-Japan Friendship Hospital, Ministry of Health, Beijing 100029; 2 Chinese Center for Disease Control and Prevention; 3 Department of Neurology, Tiantan Hospital; 4 Department of Neurology, Beijing Hospital, Ministry of
OBJECTIVE: To revise the existing assessment criteria of the Prostigmine Test (PST) in order to establish a more practical diagnostic method for patients with myasthenia gravis (MG).

METHODS: One hundred and two adult patients with confirmed MG and 97 normal controls were enrolled. All subjects received prostigmine 1.5 mg (about 0.02mg/kg) and atropine 1.0 mg intramuscular injection (0.01~0.015mg/kg). The absolute and relative scores were recorded before and every 10 minutes up to 60 minutes after injection. Diagnostic cutoff scores were determined and sensitivity and specificity assessed.

RESULTS: The test result was defined as the positive if an individual’s relative score exceeded 60%. Using this criterion, the sensitivity and specificity were 88% and 89%, respectively. The test result was equivocal if relative scores were between 25-60%, negative if all relative test scores were less than 25%. The sensitivity and specificity for the negative test were 89% and 90%, respectively.

CONCLUSION: The revised assessment criteria for the PST were standardized, objective, quantitative, accurate, simple, and practical. They provide a more reliable and practical diagnostic adjunct to clinical diagnosis of MG.

P138
A Study on the Action Mechanism of High BACE1 Expression in the Pathogenesis of Alzheimer’s disease Using Insulin-resistant Rats

D. T. Peng¹, Y. L. Li², X. M. Zhang³, A. F. Li², X. Q. Pan², J. W. Zhang⁴, ¹ China-Japan Friendship Hospital of Ministry of Public Health, Beijing, 100029, China; ² Department of Neurology, People’s Hospital of Zhengzhou University, Zhengzhou, 450001, China; ³ Department of Neurology, People’s Hospital, Peking University, Beijing 100000, China

OBJECTIVE: This study was intended to investigate the action mechanism of insulin resistance in the pathogenesis of Alzheimer’s disease (AD) by detecting histopathological characteristics of hippocampuses and expression of β-amyloid precursor protein cleaving enzyme 1 (BACE1) of insulin-resistant (IR) model rats.

METHODS: Thirty male Wistar rats aged one month were randomly selected and randomly divided into a blank group, a control group and an experimental group. Rats in the blank group were given a common diet, while rats in the control group and the experimental group were given a high-fat high-sugar high-protein diet. After three months, rats in the experimental group accepted injection of streptozotocin (STZ) 3mg/kg at one time into bilateral lateral cerebral ventricles to create IR animal models. Rats in the control group were given injection of citrate buffer at one time into bilateral lateral cerebral ventricles. After three weeks, water maze test was carried out to detect cognitive functions and behavioral changes of rats, and expression levels of BACE1 in corresponding encephalic regions were determined using molecular biological techniques including ELISA, PCR and Western blot.

RESULTS: Rats in the experimental group had obvious learning and memory disorders. (1)Marris water maze test: The mean latency to find the platform and the mean swimming distance for finding out the platform were 60.12 ± 8.76 s and 705.15± 187.28 mm in the blank group, 62.15 ± 7.52 s and 713.24± 176.49 mm in the control group, and 110.23 ± 13.86 s and 1356.72±325.87 mm in the
experimental group, respectively. The mean latency and the mean swimming distance were both significantly prolonged in the experimental group versus the blank group (P<.01) and the control group (P<.01); the mean latency and the mean swimming distance were also prolonged in the control group versus the blank group (P<.05). See Table 1. (2) Immunohistochemical pathology analysis: No senile plaques were found in hippocampuses of rats in the three groups, but Aβ-42 immunohistochemical pathology showed no obvious Aβ-42 immunohistochemical reactions in the blank group, mild Aβ-42 immunohistochemical reactions in the control group and significant Aβ-42 immunohistochemical reactions in the experimental group. (3) OD values of BACE1 determined by Western blot: The OD value was 0.232±0.012, 0.239±0.011 and 0.278±0.008 in the blank group, the control group and the experimental group, respectively. The OD value significantly increased in the experimental group versus the control group (P<.01) and the blank group (P<.01); no statistical difference was found between the control group and the blank group (P>.05). (4) mRNA expression levels of BACE1 determined by fluorescence quantitative RT-PCR: The mRNA expression level of BACE1 was 0.365±0.084, 0.410±0.083 and 0.527±0.081 in the blank group, the control group and the experimental group, respectively. The mRNA expression level significantly increased in the experimental group versus the control group (P<.01) and the blank group (P<.01); no statistical difference was found between the control group and the blank group (P>.05).

<table>
<thead>
<tr>
<th>Group</th>
<th>Latency (s)</th>
<th>Swimming distance (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank group</td>
<td>60.12 ± 8.76</td>
<td>705.15±187.28</td>
</tr>
<tr>
<td>Control group</td>
<td>62.15 ± 7.52</td>
<td>713.24±176.49*</td>
</tr>
<tr>
<td>Experimental group</td>
<td>110.23 ± 13.86</td>
<td>1356.72±325.87**</td>
</tr>
</tbody>
</table>

** Experimental group versus control group and blank group, P<0.01. *Control group versus blank group, P<0.05.

CONCLUSION: The significant increase of BACE1 expression in cerebral tissue of IR rats indicates that IR results in excessive deposition of Aβ by up-regulating BACE1 expression. This is possibly one of the action mechanisms of IR participating in pathogenesis of AD.

P139
Role of Diagnostic Significance of Serum p53 Antibodies in Lung Cancer: a Meta-analysis

Y. X. Tian, M. Yu, S. Li, X. P. Ren, L. H. Liu, W. L. Shang, S. F. Huo, Y. J. Ren, H. X. Wen, Z. Yang, S. H. Wei, L. B. Xu, J. Xiong, Department of Geriatrics Respiratory/Department of Geriatrics Oncology, Shaanxi Provincial People’s Hospital, Xi’an, 710068, China

OBJECTIVE: The study aimed to evaluate the clinical diagnostic significance of serum p53 antibody in lung cancer systematically using sing meta-analysis method.

METHODS: Literature search was made in PubMed, Cochrane and other databases to collect papers during the years of 1980-2013. Odds ratio (OR value) of Case-group and control group was present as the effect of indicators. Original data was studied using Meta-analysis software RevMan 4.2. Ten of various statistical models were used to calculate the merger OR values and 95% confidence interval...
(95% CI) at the same time, drawing meta-analysis of the forest map and the summary ROC curve finally.

RESULTS: 7 literatures were collected, and 1426 samples were brought into the study. Heterogeneity test showed that the homogeneity of the study was good and deterministic model was applied to meta-analysis. The weighted sensitivity was 0.19 (0.17-0.22), the specificity was 0.99 (0.98-1.00) and SROC area under the curve (Area under curve, AUC) to 0.6266 by using serum p53 antibody diagnosing lung cancer.

CONCLUSION: Detection of serum p53 antibodies was beneficial for the diagnosis and classification of benign or malignant pulmonary diseases. The data suggest that it has higher diagnostic values for lung cancer or potential target therapy marker.

P140
The Anti-vascular Aging Effect of GLP-1 in Arterial Calcification through Attenuating Osteoblastic Differentiation of VSMCs

J. K. Zhan, Y. J. Wang, Y. Wang, Z. Y. Tang, P. Tan, W. Huang, Y. S. Liu*, Department of Geriatrics, Institute of Aging and Geriatrics, The Second Xiang-ya Hospital, Central South University, Changsha, Hunan 410011, China

BACKGROUND: Arterial calcification is a common event in cardiovascular pathogenesis. Osteoblastic differentiation of vascular smooth muscle cells (VSMCs) is the most important cytopathologic foundation of arterial calcification. Glucagon-like peptide-1 (GLP-1) exerts multiple cardioprotective actions beyond insulinotropic effects through GLP-1 receptor (GLP-1R). However, whether GLP-1 regulates osteoblastic differentiation of VSMCs and associated molecular mechanisms have not been clarified.

METHODS: The VSMC differentiation model was established by beta-glycerophosphate (β-GP) induction. The mineralization was measured by Alizarin Red S staining. Protein expression and phosphorylation were detected by Western blot or immunofluorescence. GLP-1R gene expression was silenced by siRNA.

RESULTS: After standardization of internal protein GAPDH, GLP-1 analogue, liraglutide (1nM) inhibited the protein expression of osteoblastic differentiation markers alkaline phosphatase (ALP) (95% CI = 0.035-0.167, P = .010), osteocalcin (OC) (95% CI =.0135-0.163, P <.001), and Runx-related transcription factor 2 (Runx2) (95% CI =0.072-0.149, P =.001), phosphorylation of PI3K p85 (95% CI =0.093-0.107, P <.001), PI3K p110(95% CI =0.109-0.137, P <.001), Akt (95% CI =0.067-0.095, P <.001), mTOR (95% CI =0.098-0.126, P <.001), and S6K1 (95% CI =0.121-0.149, P <.001) compared with control group. At the same time, the mineralization of VSMCs was attenuated by liraglutide (1nM) measured by Alizarin Red S staining. Silencing of GLP-1R gene expression by siRNA significantly blocked the effects of liraglutide (1nM) in ALP( 95% CI =0.065-0.139, P = .001) protein expression, PI3K(95% CI =0.058-0.115, P =.002) and Akt(95% CI =0.034-0.210, P =.015) phosphorylation, and VSMCs mineralization.

CONCLUSION: GLP-1 attenuates the osteoblastic differentiation and mineralization of VSMCs through its receptor and subsequent activation of PI3K/Akt/mTOR/S6K1 signaling. GLP-1 analogues may be the potential agents for the treatment of cardiovascular diseases.
P141
Effect of the Combined Increase of C-Reactive Protein and Uric Acid Level on Metabolic Syndrome and its Components

W. H. Zhu, L. Z. Fang, J. H. Chen, Y. Chen, L. Y. Chen, Department of Family Medicine, Sir Run Run Shaw Hospital, College of Medicine, Zhejiang University, Hangzhou, 310016, China

OBJECTIVES: The combined effect of C-reactive protein (hs-CRP) and uric acid on progression of metabolic syndrome (MS) is inadequately defined. The aim of this study was to evaluate the effect of the combined increase of high-sensitivity C-reactive protein (hs-CRP) and uric acid (UA) on metabolic syndrome and its components.

METHODS: A total of 21936 subjects who took well-man or -woman check up in our hospital were enrolled. Hs-CRP, uric acid, fasting plasma glucose, lipid profile, waist circumference and blood pressure were measured to analyze the relationship between metabolic syndrome and its components with hs-CRP and uric acid in three groups: (low-risk group: hs-CRP<1 md/dl; mid-risk group: hs-CRP 1~3 md/dl, and high-risk group: hs-CRP>3 md/dl).

RESULTS: (1) As hs-CRP values increased, waist circumference, uric acid, triglycerides, fasting plasma glucose, systolic blood pressure, diastolic blood pressure and high-density lipoprotein increased among the three groups. F values were 86.38, 41.11, 23.37, 18.56, 19.22, 17.88 and 12.23 separately (p<0.01). (2) Mid and high-risk groups of hs-CRP with hyperuricemia were closely related to waist circumference, triglycerides and systolic blood pressure. OR values were 3.26, 3.27, 1.59 and 3.77, 3.38, 1.64 separately (p<0.05). (3) The incidence of metabolic syndrome increased gradually with the combined increases of hs-CRP and uric acid. They were 49.06% and 55.59% in the mid and high-risk groups of hs-CRP with hyperuricemia (p<0.01).

CONCLUSIONS: With increased values of both hs-CRP and uric acid, metabolic disorders tended to be worse and the incidence of metabolic syndrome was increased. Hs-CRP and uric acid can be used as a clinical predicting or monitoring item for MS.

P142
The Epidemiological Characteristics of Falls and Fall-related Injuries among Community-dwelling Patients with Stroke in Shanghai

J. Yu, Q. H. Xia, H. Jia, P. Zhou, B. Zhang, Y. H. Li, Changning Center for Disease Control and Prevention in Shanghai, 200051, China

OBJECTIVE: To study the epidemiological characteristics of falls and fall-related injuries among community-dwelling patients with stroke in Changning district, Shanghai.

METHODS: Random sampling was applied in this study. 1498 patients with stroke and aged 60 and above from communities of Changning district were randomly recruited and self-designed questionnaire was used in this survey.

RESULTS: In this survey of 1498 stoke patients, the incidence of falls, fall-related injury and fracture in the past one year was 28.9%, 18.2% and 5.5% respectively. Among the 28.9% of falls, 3.9% fell due
to onset of a stroke. Totally 579 times of fall occurred and the incidence was 36.4%. There was significant difference of fall incidence among different age groups and between those with or without stroke related sequelae ($\chi^2=13.211$, $P<0.01$), but no significant difference was observed between patients with different types of stroke, different afflicted body part and different interval between the patients. The main suspected cause of falls included foot weakness, dizziness and loss of balance during walk. After a fall, all the patients who were induced falls because of stroke were hospitalized and 36.4% of them needed ambulance service. For other patients suffered from fall-related injury, 43.9% needed medical treatment, and 8.4% needed ambulance service. The median medical expense was 705 yuan. 7.3% patients with fall related injury lost their independence in daily live due to falls.

CONCLUSIONS: Because of high fall incidence and severe consequences, falls significantly increase the medical service use and pose heavy burden on family and society. More emphasis should be laid on stroke patients.

PI43

Neuroimaging and Neuropsychological Characteristics of aMCI

C. C. Yang$^1$, M. J. Zhu$^1$, J. H. Wang$^1$, T. Wang$^1$, Y. Y. Liu$^1$, N. Su$^1$, J. Dai$^1$, M. X. Hu$^2$, S. F. Xiao$^1$,

Alzheimer's Disease and Related Disorders Center Shanghai Jiaotong University; Shanghai Mental Health Center; Shanghai Jiaotong University School of Medicine, Shanghai 200030, China; $^2$ IXICO Ltd and Imperial College, London, UK

OBJECTIVE: The study aimed to understand the brain structure changes and associated cognitive impairment characteristics in patients with aMCI, and preliminarily to discuss the diagnostic value of neuroimaging and neuropsychological biomarkers for aMCI.

METHODS: 35 cases of aMCI patients and 35 healthy subjects were chosen in Shanghai community-dwelling older adults from China Longitudinal Aging Study. 3-D MRI data acquisition for brain structure information was used to calculate left and right side and mean volume of hippocampus, amygdala and temporal angle by using Learning embeddings atlas propagation (LEAP). MoCA was used to assess cognitive function, and SPSS 13.0 was used for data processing and analysis.

RESULTS: Neuropsychological and neuroimaging characterizations for group are shown in Tables 1-4 and Figure 1. No significant differences in age and gender were observed among the 2 groups ($t=1.725$, $P=.089$; $Z^2=3.333$, $P=.068$), however, education was statisstically significant difference ($t=8.695$, $P<.001$). Multivariate analysis of variance indicated that the NC group performed better than the patients with aMCI in most of the cognitive domains, including MoCA ($F=32.519$, $P<.001$), attention ($F=11.659$, $P<.05$), repeating sentences ($F=18.128$, $P<.001$), abstraction ($F=4.709$, $P<.05$), delayed recall ($F=8.327$, $P<.05$), and orientation ($F=5.315$, $P<.05$). The aMCI showed volume loss in left, right and mean hippocampus ($F=7.870$, $P<.05$; $F=15.601$, $P<.001$; $F=13.572$, $P<.001$), and right temporal angle ($F=5.236$, $P<.05$). MoCA scores were correlated with right and mean hippocampus ($r=0.360$, $P<.05$; $r=0.315$, $P<.05$), and right amygdala ($r=0.253$, $P<.05$). ROC analysis showed that MoCA (cut-off points=16.5, Sensitivity(Sn)=97.1%, Specificity(Sp)=82.9%, UAC=0.971 ), left, right and mean hippocampus (cut-off points=2.393/ 2.511/2.441, Sn=85.7%/91.4%/85.7%, Sp=85.7%/74.3%/82.8%, UAC=0.86/0.867/0.876 ), and amygdala(cut-off points=1.722/ 1.461/1.58, Sn=71.4%/71.4%/74.3%, Sp=71.4%/71.4%/74.3%, UAC=0.707/0.731/0.728 ) had high diagnostic accuracy for aMCI ($P<.05$). For cognitive measures, Wilks' Lambda stepwise discriminant analysis showed that MoCA and repeating sentence achieved a classification accuracy of 88.6% (Wilks’
\( \Lambda = 0.299, \chi^2 = 80.905, df = 2, P < 0.001 \). For brain structure, mean hippocampus and amygdala was 81.4% (Wilks’ Lambda = 0.515, \( \chi^2 = 44.509, df = 2, P < 0.001 \)). Furthermore, mean hippocampus and left amygdala, combined to MoCA, achieved a classification accuracy of 95.7% (Wilks’ Lambda = 0.261, \( \chi^2 = 89.228, df = 3, P < 0.001 \)).

CONCLUSION: Hippocampus and amygdala atrophy and cognitive impairment have specific value for identifying aMCI stage. Combining two classes of measures for the early detection of MCI provides more accurate biomarkers than those based on neuroimaging or cognitive measures alone.

**P144**

Evaluation of the Potentially Inappropriate Medication with Beers Criteria in Hospitalized Elderly Patients

X. L. Sun, T. Lv, M. H. Yang, H. J. Yu, *Department of Geriatrics, First Affiliated Hospital of Dalian Medical University, Dalian, 116011, China*

**BACKGROUND:** Inappropriate medication (PIM) may cause adverse drug reaction (ADR), adverse drug events (ADEs), increase hospitalization rates, mortality rates as well as medical expenses. This study aimed to evaluate the potentially inappropriate medication (PIM) with Beers Criteria in the elderly patients.

**METHODS:** 439 inpatients were enrolled in the study with the age between 65-95 years old (average age 79.56±7.12 years old), and 262 were male with the mean age of 79.56±7.12 years old, and 177 female with the mean age of 77.12±6.66 years old. All the patients were hospitalized from 2 to 30 days, and the patients with malignant tumors or with hospitalization history in the hospital were excluded. Multiple logistic regression analysis was used to analyze the prognostic significance of clinical and pathological characteristics.

**RESULTS:** Among the 439 cases, 79 cases (18.00%) took fewer than 5 kinds, 82% of the cases took more than 5 kinds of drugs, 191 cases (43.51%) took 5-10 kinds, 160 cases (36.45%) took 11-20 kinds, and 8 cases (1.82%) took more than 20 kinds. Traditional Chinese medicine preparations were applied to 45 inpatients (10.25%), including preparations such as Ligustrazine Phosphate Injection, Ginkgo leaf extract. In accordance with the Beers Criteria, 76 objects had taken 82 person-doses of PIMs totally, 70 objects (15.95%) took one PIM, 6 objects (1.37%) took two PIMs. 74 cases of PIMs were unconcerned in diagnosis or disease. The highest frequency of PIM drugs were alprazolam, estazolam, amiodarone and sandy lamicta. 18 cases (1.82%) of PIMs were related to diagnosis or disease. 66 cases (15.03%) took drugs that need to be used with caution in older adults. 23 cases (5.24%) were other PIMs that are not included in Beers Criteria, due to the cause of drug interactions. Logistic regression analysis showed that kinds of drugs, male entered into the regression equation (p < 0.05).

**CONCLUSION:** Beers criteria have important application value, but they can not replace professional judgment. Many factors lead to the elderly PIM. Measures should be taken to control these factors, and to reduce the occurrence of adverse drug reactions.

**P145**

The Inhibitory Effect of Chlorogenic Acid on Biofilm of Pseudomonas Aeruginosa in Vitro

H. X. Wen, L. Sun, *Department of Elderly Respiratory Disease, Shaanxi Provincial People’s Hospital,*
OBJECTIVES: To observe the inhibitory effect of chlorogenic acid on *Pseudomonas aeruginosa* adhering to the surface of carriers, to explore its mechanism in vitro, and to observe the inhibitory effect of chlorogenic acid on the biofilm formation of *Pseudomonas aeruginosa*.

METHODS: The minimal inhibitory concentration (MIC) of chlorogenic acid and erythromycin (EM) against PAO1 was detected, and the biofilm models of *Pseudomonas aeruginosa* in vitro were divided into 3 groups: control group, EM group and chlorogenic acid group. EM (1/8MIC) and chlorogenic acid (1/4MIC) were added at the beginning of constructing biofilm models. The biofilm on the surface of carriers was examined under SEM and the viable bacterial counts within biofilm were determined. The swimming, swarming and twitching motility of *Pseudomonas aeruginosa* was detected by using different medium. The flagellin of *Pseudomonas aeruginosa* was observed under the transmission electron microscopy (TEM). EM (1/8MIC) and chlorogenic acid (1/4MIC) were added at the beginning of making biofilm models.

RESULTS: The MIC of chlorogenic acid against *Pseudomonas aeruginosa* was 3000ug/ml, and adn EM was 128ug/ml. The counts of *Pseudomonas aeruginosa* adhering on the surface of carriers: micro-colonies and floating bacteria were seen in the control group under SEM. While both in the EM group and chlorogenic acid group there were only a small amount of *Pseudomonas aeruginosa*. Viable bacteria counts showed that the chlorogenic acid group was less than control group (P<0.01) and the EM group (P<0.05). The concentric region diameter formed by the swimming motility of *Pseudomonas aeruginosa* both in chlorogenic acid group and EM group were smaller than those in the control group (P < 0.01), but there were no difference between chlorogenic acid group and the EM group (P>0.05). The concentric region was formed by the swarming motility of *Pseudomonas aeruginosa* in all the three groups. The surrounding of a circular area is formed of radial-like gear in the control group, but short and sparse-like graphics can be seen in the EM group, and the surrounding of a circular area was smooth in the chlorogenic acid group. The diameter of a circular area was smaller than that in control group (P < 0.01) and EM group (P<0.01). By observation of the twitching motility with microscopy, the colonies were surrounded with distribution of coral-like radial in the control group, but in the EM group the radial-like pseudopodia surrounding of colonies were scarce. In chlorogenic acid group the surrounding of colonies were more smooth, and there were only a small amount of bacterial gathered as pseudopodium. A unipolar flagellum could be seen at the one pole of the *Pseudomonas aeruginosa* in the control group. The flagellum was shedding seriously both in the chlorogenic acid group and EM group, and, it was shorter than the control group. After cultivated for 3 days, early biofilm could be seen in the control group under SEM. The scale of the biofilm both in the chlorogenic acid group and EM group formed were smaller than that in the control group. After cultivation for 7 days, there were a large number of mature biofilm in the control group, but a few of thin biofilm could be seen both in the chlorogenic acid group and EM group. Whether it was cultivated for 3 days or 7 days, the semi-quantitative biofilm by crystal violet staining in chlorogenic acid group was less than that in the control group (P<0.01) and EM group (P<0.05). The alginate contents in culture medium in the chlorogenic acid group was not only less than the control group (P<0.01), but also less than the EM group (P<0.05). The antibiotic susceptibility of *Pseudomonas aeruginosa* in the biofilm showed that ceftazidime (CAZ) was susceptible to it in all the three groups after cultivation for 3 and 7 days.

CONCLUSIONS: Sub-inhibitory concentration of chlorogenic acid can inhibit *Pseudomonas aeruginosa* adhering on the surface of carriers by restraining its swimming, swarming and twitching motility. Chlorogenic acid can inhibit the production of alginate, then restrain *Pseudomonas aeruginosa* from forming biofilm on the surface of carriers. CAZ is susceptible to the *Pseudomonas aeruginosa* in the biofilm in all the three groups. The influence of chlorogenic acid to antibiotic susceptibility of
Pseudomonas aeruginosa is less than EM.

P146
A Stratified Study of Brachial Ankle Pulse Wave Velocity and C-Reactive Protein with Metabolic Components

W. H. Zhu, L. Y. Chen, L. Z. Fang, J. H. Chen, Y. H. Zhou, Department of Family Medicine, Sir Run Run Shaw Hospital, the Affiliated Hospital of Zhejiang University, Hangzhou, 310016, China

OBJECTIVE: To investigate the association between high-sensitivity C-reactive protein (hs-CRP), metabolic components and the Brachial Ankle pulse Wave Velocity (baPWV).

METHODS: A total of 5192 subjects were enrolled from the annual health checkup subjects. BaPWV were determined by VP-1000 (BP-203RPE Ⅲ). Hs-CRP, blood pressure, fasting plasma glucose, waist circumference, triglyceride and high-density lipoproteins were measured. The subjects were classified into three subgroups: baPWV change rates<13% (group 1), 13%≤ baPWV change rates<26% (group 2), and baPWV change rates≥26% (group 3).

RESULTS: (1) The hs-CRP values increased gradually as the change rates of baPWV increased. The level of hs-CRP was 1.34mg/dl vs 1.71 mg/dl vs 2.16mg/dl in three groups (P<0.01). (2) With increased number of metabolic components baPWV values, baPWV change rates and hs-CRP values increased greatly. F values were 126.81, 101.58, and 84.07, respectively (P<0.01). (3) Logistic regression showed that subjects with baPWV change rates≥26% demonstrated a close relationship with systolic pressure, diastolic pressure, fasting blood glucose, and hs-CRP. OR values were 5.19, 3.82, 1.61, and 1.51, respectively (P<0.01).

CONCLUSION: The Brachial Ankle pulse Wave Velocity was closely related to C-reactive protein and metabolism components. Brachial Ankle pulse wave velocity and C-reactive protein can be used for screening early arteriosclerosis as well as metabolism components.

P147
Clinical Observation on Senile Patients with Acute Gouty Arthritis Treated by Acupoint Application


OBJECTIVE: To observe and evaluate the clinical efficacy of acupoint application on senile acute gouty arthritis.

METHODS: 64 senile acute gouty arthritis patients were randomly divided into two groups with 32 cases in each group. The control group was treated with colchicine tablets orally according to the normal dose and method, while the acupoint therapy group was given acupoint application at Quchi, Sanyinjiao, Yinlingquan, Taichong, Zusanli, Ashi and others points besides the half colchicine dosage of the control group.

RESULTS: The total effective rate was 84.38% in the control group and was 96.88% in the acupoint
group, which indicated significant difference in comparison \((P<0.05)\). It was observed that the therapy in acupoint group shortened the analgesic time \((P<0.01)\), reduced the adverse reaction \((P<0.05)\) and decreased serum uric acid levels \((P<0.05)\) significantly as compared with the control group.

**Table 1 Comparison of adverse reactions in the two groups (cases) %**

<table>
<thead>
<tr>
<th>Group</th>
<th>Cases</th>
<th>Nausea and vomiting</th>
<th>Diarrhea</th>
<th>Abdominal pain</th>
<th>Itching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>32</td>
<td>11 (34.38)</td>
<td>23 (71.88)</td>
<td>14 (43.75)</td>
<td>/</td>
</tr>
<tr>
<td>Acupoint group</td>
<td>32</td>
<td>7 (21.88) ▲</td>
<td>14 (43.75)▲▲</td>
<td>10 (31.25) ▲</td>
<td>3 (9.38)</td>
</tr>
</tbody>
</table>

Note: Comparison with the control group, ▲ \(P<0.05\) and ▲▲ \(P<0.01\).

**Table 2 Comparison of efficacy in the two groups (cases) %**

<table>
<thead>
<tr>
<th>Group</th>
<th>Cases</th>
<th>Obvious efficacy</th>
<th>Efficacy</th>
<th>No efficacy</th>
<th>Total efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>32</td>
<td>20 (62.50)</td>
<td>7 (21.88)</td>
<td>5 (15.63)</td>
<td>27(84.38)</td>
</tr>
<tr>
<td>Acupoint group</td>
<td>32</td>
<td>26 (81.25)</td>
<td>5 (15.63)</td>
<td>1 (3.13)</td>
<td>31(96.88)</td>
</tr>
</tbody>
</table>

**Table 3 Comparison of pain relief in the two groups**

<table>
<thead>
<tr>
<th>Group</th>
<th>Cases</th>
<th>Time to achieve pain relief (h)</th>
<th>Time to achieve dissipation of swelling (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>32</td>
<td>15.65±4.82</td>
<td>6.21±2.33</td>
</tr>
<tr>
<td>Acupoint group</td>
<td>32</td>
<td>10.81±3.25▲</td>
<td>5.64±2.92▲▲</td>
</tr>
</tbody>
</table>

Note: Comparison with the control group, ▲ \(P<0.01\) and ▲▲ \(P>0.05\).

**Table 4 Comparison of serum uric acid levels in the two groups (µmol/L)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Cases</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group</td>
<td>32</td>
<td>518.4±47.6</td>
<td>495.2±37.2 △</td>
</tr>
<tr>
<td>Acupoint group</td>
<td>32</td>
<td>532.1±38.8</td>
<td>412.6±32.9▲*</td>
</tr>
</tbody>
</table>

Note: Comparison with the situation before treatment, △ \(P>0.05\) and ▲ \(P<0.05\), comparison with the control group, * \(P<0.05\).

**CONCLUSION:** Acupoint application therapy gives rapid relief to sufferers from gout, which is effective and safe for senile patients with acute gouty arthritis, and is worthy to recommend its clinical use.

**P148**

**Prevalence of and Risk Factors Associated with Nonalcoholic Fatty Liver Disease in Elderly People Living in Shanghai**
OBJECTIVE: To understand the epidemiology of nonalcoholic fatty liver disease (NAFLD) in the elderly and to find the risk factors for NAFLD.

METHODS: 805 elderly people with the age ranging from 60 to 92 years old in our Medical center in 2013 were selected. Each consenting elderly people underwent a detailed medical history-taking, physical examination, laboratory assessment and liver ultrasonographic scan. Two-sample t-test, Man-Whitney U-test and multivariate regression analysis were used to analyze the data.

RESULTS: About 57.67% employees had NAFLD, 58.80% for men and 55.27% for women. In the normal control, the prevalence of obesity, abdominal obesity, BP≥130/85mmHg or hypertension, dyslipidemia, FPG≥5.6mmol/L or type 2 diabetes were 23.82%, 16.47%, 60.29%, 28.82%, 26.47% respectively. While the prevalence of the metabolic factors above were 57.85%, 45.38%, 77.63%, 58.06% and 40.86% respectively in NAFLD group, which were significantly higher than those of normal control. Logistic analysis revealed that NAFLD was more likely to occur in subjects with high TG levels in males (OR 3.809), followed by obesity (OR 2.188), abdominal obesity (OR 2.401), high blood pressure (OR 1.753), high FPG (OR 1.508) and low HDL (OR 1.484). In females, abdominal obesity was the strongest associated factor (OR 3.806), followed by obesity (OR 3.158), Hypertriglyceridemia (OR 2.696), low HDL (OR 1.501) and high FPG (OR 1.336). There was no relevance between high BP and NAFLD in the female elderly (OR 0.746).

CONCLUSIONS: The prevalence of NAFLD in Shanghai elderly population is high. Metabolic factors might increase the risk of NAFLD up to 1.3 ~ 3.6 times.

P149
Relationship between Isokinetic Strength, Pain and Functional Status in Patients with Knee Osteoarthritis Aged over 80

C.S. Weng, Y.M. Guo, W. Chen, C.H. Li, N. Wang, Department of Rehabilitation Medicine, The General Hospital of PLA, Beijing, 100853, China

OBJECTIVE: To evaluate the difference in isokinetic strength of knee muscles between patients with knee osteoarthritis (KOA) aged over 80 and matched healthy controls, and to establish the correlation between isokinetic strength and pain and functional status in patients with knee OA.

METHODS: Thirty-two patients with a diagnosis of unilateral knee OA aged over 80 and 10 matched controls were enrolled. VAS and Lequesne index were used to assess patients with knee OA. Functional ability was assessed by the Timed up and go test (TUGT), Five times sit to stand test (FTSST) and Timed 10-meter walk test (TWT). Muscle strength was measured using the isokinetic dynamometer Biodex System 4 Pro. Bilateral isokinetic (concentric) knee flexion and extension with the protocol of 60 degrees/sec, 180 degrees/sec were performed.

RESULTS: Knee OA group and control group between two angular velocity of extensor and flexor peak torque was significantly different (P <0.05). Extensor peak torque and age, Liquesce index scores, FTSST, TUGT and TWT was a significant negative correlation (P<0.05). No correlation between Extensor peak torque and VAS score and Lequesne index pain score (P> 0.05). Using reverse regression, extensor peak torque, VAS score together significantly predicted Liquesce index (adjusted R= 0.41).
CONCLUSION: Quadriceps strength and intensity of pain is an important indicator to predict disability in patients with Knee OA aged over 80.

P150
Pay Attention to the Spread and Promotion of Appropriate Technology in Health Education of the Elderly Health Management

R. Zheng, W. Y. Niu, School of Public Health, Peking University, Beijing 100191, China

OBJECTIVES: Appropriate technologies belong to preventive health care which can be afforded and universally used by people. Effectiveness, universality and economy are three essential characteristics. The study aimed to summarize appropriate technologies in the prevention, control and health education of the elderly health management, so as to generalize them among public groups.

METHODS: As the primary participants of "Eleventh Five-Year” National Science and Technology Support Project --- “Study on Screening and Evaluating Consumer Health Knowledge and Technology”, we have combined existing basic prevention methods with literature retrieval and review, expert discussion, quantitative survey, qualitative interview, field research, communication material making, package information resources development and common people classes, etc.

RESULTS: Eventually, we summed up the integrated appropriate technologies including health management technologies, measuring blood pressure for the first time, salt limitation technologies, reasonable movement methods, psychological support technologies and early recognition methods, etc. They were respectively suitable for different groups in the prevention and control of chronic diseases that occurred on the elderly. Establish community electronic archives among the elderly. This is an effective management of physical conditions and diseases that can be available for medical personnel in a comprehensive and dynamic way. Contents of health education should be varied and distinguished based on the features of target populations. In the work of health communication, we can yield twice the result with half the effort by using scientific as well as artistic health communication skills, and use plain languages which are featured by its straightaway contents, motivational and contagious effects. Key points have been screened, refined and summarized from a great deal of information about diseases prevention and control. 30 pieces of core information have been summarized in specification standards into the general practitioner version, and 29 pieces of that have been summarized into the general version. Cartoons, pictures, wall maps, and movies should be vastly used in health education materials in order to make the information plain, clear and concise. Develop and provide individual management tools. These methods including personal dietary and physical activity guidance materials, balanced diet maps, limited salt spoons and pots are useful. At the same time, we have summarized the advantages of “Food exchange serving” with reference system in controlling dietary intake. Evaluate physical activities by quantizing. For example, take conversion between “Thousand Step Activity” and other movements, so that to avoid blind sports which can bring physical discomfort. Gradually reduce the happening of smoking and drinking by using “Social Support”, “Turning Attention” and “Grandson Therapy”.

CONCLUSIONS: All the above appropriate technologies can be promoted on the basis of evidence-based researches and pilot practice. These methods can also be considered as interventions which are applied for the elderly health management.
P151
Expression of HMGA1, SIRT1, and Ki-67 Represent as Prognostic Biomarkers for Lung Cancer Patients

F. Peng¹, J. Xu³, L. Zhao¹, Y.B. Cao¹, Q.D. Huang¹, G.F. Wang¹,², ¹Zhejiang Provincial Key Laboratory of Geriatrics & Geriatrics Institute of Zhejiang Province, Zhejiang Hospital, Hangzhou 310013, Zhejiang, China; ²Wenzhou Medical University, 325035, Zhejiang, China; ³Department of Radiation Oncology, the Second Affiliated Hospital and Cancer Institute, Zhejiang University School of Medicine, Hangzhou 310009, China

BACKGROUND: Although HMGA, SIRT1 and Ki-67 proteins appeared to occur widely in different cancers, few studies have investigated the definite role of these proteins in lung cancer. The aim of this was to evaluate the expression of these proteins in a series of lung cancers and to investigate whether these protein expressions may be indicators for the diagnosis and prognosis of lung cancer.

METHODS: The frequency of HMGA, SIRT1, and Ki-67 expression was determined immunohistochemically in 300 lung cancer patients. The overall survival rate was analyzed by the Kaplan-Meier method and the log-rank test using SPSS 19.0 software.

RESULTS: HMGA, SIRT1, and Ki-67 overexpression in the studied cases were 76.0%, 34.3%, and 24%, respectively. The positivity for HMGA1 was more intense in males than in females (P=0.0378). SIRT1 overexpression did not significantly relate to the clinicopathological characteristics of the tumors. Meanwhile, there was a significant difference in Ki-67 expression regarding gender (P=0.000) and High expression of Ki-67 was likely to be seen in lung squamous cancer. Kaplan-Meier analysis demonstrated that there was no significant difference for existed survival between different HMGA1, SIRT1, and Ki-67-scores. Multivariate regression analysis identified differentiation, hospital stays, HMGA1 and Ki-67 expression to be independent prognostic factors predicting a poor outcome. In addition, younger age, less advanced TNM-staging, and SIRT1 expression predicted for better overall survival.

CONCLUSIONS: HMGA, SIRT1, and Ki-67 expression were common in lung cancer. All these protein overexpression showed prognostic value for lung cancer patients with different tumor differentiation, which brought us to consider these targets for therapeutic intervention of lung cancer.

P152
Age-related Changes of Biological Activity Factors in Beagles Gastric Mucous

F. Liu, S. B. Zheng, X.W. Li, X.L. Zhang, Huadong Hospital, Shanghai, 200040, China

OBJECTIVE: To investigate the influence of aging on the biological activity factors which were associated with gastric mucosal defense and repair

METHODS: 19 healthy Beagles were divided into three groups: young group (≤6y, n=8), junior elderly group (6 < x < 9y, n=5), senior elderly group (≥ 9y, n=6). We detected some biological activity factors, including MDA, MPO, LPO by TBA assay, NO by nitrate reductase. Survivin, PTEN, CGRP, VEGF, close junction protein ZO-1, COX-1, COX-2, Caspase-3, Caspase-9 and telomerase levels were detected by Elisa assay.
RESULTS: The levels of LPO (\( \bar{x} \pm S = 0.77 \pm 0.29, 0.90 \pm 0.09, 1.08 \pm 0.15, F=3.74, P=0.047 \)), PTEN (\( \bar{x} \pm S = 1.65 \pm 0.49, 1.43 \pm 0.90, 2.75 \pm 0.85, F=5.50, P=0.015 \)), Caspase-9 (\( \bar{x} \pm S = 0.75 \pm 0.24, 0.65 \pm 0.36, 1.25 \pm 0.21, F=8.95, P<0.002 \)) increased, while Survivin (\( \bar{x} \pm S = 58.68 \pm 11.24, 33.47 \pm 22.47, 1.25 \pm 0.21, \)) decreased significantly in three groups with aging. In pairwise comparisons, the contents of VEGF (\( \bar{x} \pm S = 106.54 \pm 24.94, 62.90 \pm 38.54, F<0.05 \)) in young group were significantly higher than in junior elderly group. MPO (\( \bar{x} \pm S = 3.77 \pm 2.33, 6.37 \pm 2.34, P<0.05 \)) in young group was lower than that in senior elderly group, while Caspase-3 (\( \bar{x} \pm S = 1.38 \pm 0.15, 1.61 \pm 0.24, P<0.05 \)) was higher. Although the levels of MDA tended to increase, NO, CGRP, ZO-1 and telomerase tended to decrease with aging, and there were no significantly differences neither in three groups nor in every two groups.

CONCLUSIONS: These results suggest that the biological factors have a series of unfavorable changes which may lead to the deterioration of GMD-RM in aged Beagles.

P153
Comparative Study of Cognitive Function between Late-life Depressive Disorder and Amnestic Mild Cognitive Impairment

Y. Cheng, T. Wang, L. Sun, X. Lin, C.C. Yang, Y.Y. Liu, G.J. Li, S.F. Xiao, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Alzheimer's Disease Center, Shanghai, China

OBJECTIVE: To compare cognitive function among patients with late-life depressive disorder, amnestic mild cognitive impairment patients and normal controls.

METHODS: We recruited 38 patients with depressive disorder who were older than 60 years old as late-life depression disorder (LDD) according to DSM-IV diagnostic criteria, 43 patients with amnestic mild cognitive impairment (aMCI) and 40 cases of normal control (NC). The differences in cognitive function among three groups were compared using Mini-mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA) and Auditory Verbal Learning Test (AVLT).

RESULTS: The results of MMSE showed that LDD group had statistically significant differences in the mean of MMSE total score, time orientation, place orientation, computation and attention, delayed recall compared with normal controls (\( t = 4.815~2.759, P < 0.05 \)). There were statistically significance between aMCI and NC groups in time orientation, immediate memory and computation and attention, delayed recall, three-step instructions and written instruction of MMSE (\( t = 2.242~3.922, P < 0.05 \)). LDD and aMCI groups the MMSE score, calculation and attention and delayed recall had no statistical significances (\( t = 4.815~2.759, t = 5.593~3.995, P > 0.05 \)) compared with those of normal controls, but there were statistical significance between LDD and aMCI groups (\( t = 0.619~1.134, P < 0.05 \)). The results of MoCA showed that LDD group compared with normal controls in MoCA total score, trail making test, clock drawing task, naming, attention, sustained attention, calculation, retelling, delayed recall and time orientation had statistically significant differences (\( t = 6.143~3.081, P < 0.05 \)). There were statistically significant differences in mean of MoCA total score, trail making test, copying graphics, clock drawing task, naming, attention, sustained attention, calculation, retelling, fluency, abstract thinking, delayed recall and location directional between aMCI and NC groups (\( t = 7.138~2.145, P < 0.05 \)). There were no statistically significant differences in MoCA total score, trail making test, clock drawing task, naming, attention, sustained attention, calculation, retelling and
delayed recall between LDD and aMCI groups (t = 0.792~1.169, P > 0.05), but the two groups of patients had statistical significances compared with normal controls in the mean of these items (t = 6.143~5.283, t = 7.138~4.263, P < 0.05). All the items in Auditory Verbal Learning Test (AVLT) had statistical significance compared the two groups (LDD and aMCI) with normal controls (t = 5.111~4.541, t = 6.194~3.553, P < 0.05).

CONCLUSION: The level of memory function, attention function in elderly patients with depressive disorder was equal with aMC patients. Executive function, visuospatial skills, language function and orientation were impaired in patients with late-life depressive disorder, but these cognitive domains were less impaired than the patients with aMCI.

P154
Voxel-based Morphometry of Whole Brain Gray Matter in Patients with Late-life Depressive Disorder and Amnestic Mild Cognitive Impairment

C. Cheng, T. Wang, L. Sun, X. Lin, C. C. Yang, X. Li, G. J. Li, S. F. Xiao, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Alzheimer’s Disease Center, Shanghai 200030, China

OBJECTIVE: To explore the pattern of volume changes of the whole brain gray matter in patients with late-life depressive disorder and amnestic mild cognitive impairment by voxel-based morphometry (VBM).

METHODS: 24 patients with late-life depression disorder (LDD), 26 patients with amnestic mild cognitive impairment (aMCI) and 34 normal controls had undergone magnetic resonance scanning. Gray matter volume differences of the whole brain were assessed using SPM8 to make voxel-based morphometry (VBM) comparison between the patients group and the control group.

RESULTS: The volume of the left postcentral gyrus (T = 5.34), precentral gyrus (T = 4.18), superior parietal lobule (T = 3.99) parietal lobe (T = 4.71) and bilateral frontal lobe (T = 4.72, T = 4.16) in the LDD patient group was significantly smaller than that in control group (P < 0.001, uncorrected, K≥30 voxel) (Table 1). The volume of the left middle temporal gyrus (T = 3.99), inferior frontal gyrus (T = 4.05), the right middle frontal gyrus (T = 4.56), precentral gyrus (T = 4.11), insula (T = 3.77) and hippocampus (T = 3.71), bilateral parahippocampal gyrus (T = 3.50, T = 3.30) and superior temporal gyrus (T = 4.04, T = 3.72) in the aMCI patients group was significantly smaller than that in NC group (P < 0.001, uncorrected, K≥30 voxel) (Table 2). The volume of the left lentiform nucleus (T = 4.27), parietal lobe (T = 3.84) and temporal lobe (T = 3.88), right parietal lobule (T = 4.22), precuneus (T = 4.03), Superior Parietal Lobule (T = 4.01), inferior parietal Lobule (T = 3.70), insula (T = 3.87) and superior temporal gyrus (T = 3.79) in aMCI patient group was significantly smaller than that in the LDD patient group (P < 0.001, uncorrected, K≥30 voxel) (Table 3).

CONCLUSION: VBM can reveal wide spread volumetric reduction of gray matter in aMCI brain. The patients with late-life depressive disorder in the region of the brain gray matter atrophy were mainly on bilateral frontal lobe and left parietal lobe.

P155
A Single-centre Based Analysis of Hospitalized Elderly Surgical Patients and the
Related Perioperative Mortality

W. L. Lu, S. D. S. Kumar, S. B. Zheng, Department of Geriatric Medicine, Huadong Hospital Affiliated to Fudan University, Shanghai, China

OBJECTIVE: This study aimed to describe the situation of hospitalized elderly surgical patients and their associated perioperative mortality at our center, so as to develop strategies to reduce perioperative mortality rate.

METHODS: A retrospective survey of all patients admitted to Huadong Hospital in Shanghai from January 2006 to December 2010 was made. All surgical patients were selected and divided into a young and middle-aged group (18-59 years) and an elderly group (≥60 years). Data collected was analyzed to investigate perioperative mortality.

RESULTS: Elderly surgical patients represented 21.50% to 24.54% of total hospital admissions and 45.6% to 52.0% of all surgical admissions. The main indications for surgery were due to abdominal, urological, and orthopaedic disorders. The reported perioperative mortality rate in hospitalized elderly surgical patients (1.15%) was significantly higher than that in young and middle-aged patients (0.26%), (p <0.001) and with increasing age it increased exponentially in elderly patients (p <0.001). The perioperative mortality rates among the different surgical departments were significant. In neurosurgery and thoracic surgery they were relatively higher, (p <0.001). Chest infection, respiratory failure, multiple organ dysfunction syndrome (MODS), septic shock, heart failure and acute myocardial infarction were the main causes of perioperative deaths in elderly patients, and infection was an important risk factor for some of these causes of death. In the young and middle-aged patients, progression of the primary disease was the leading cause of perioperative death.

CONCLUSION: With increased ageing of the population, more and more elderly patients need surgical treatment, but surgical risk in these patients is high and so is the perioperative mortality rate. In elderly patients, to reduce perioperative risk to a minimum comprehensive preoperative assessment is required.

P156
Expression of Regenerative and Antioxidative Molecules in the Liver of Old and Young-middle Aged Beagle Dogs Liver

X. L. Zhang, S. B. Zheng, F. Liu, X. W. Li, Department of Gastroenterology, Huadong Hospital, Affiliated to Fudan University, Shanghai, 200040, China

BACKGROUND: Ability of liver can remove harmful substances and make liver cells proliferate to maintain its functions. Elders are apt to be affected by stress result to liver injury. This study was to detect the expression of apoptosis promoters (Caspase3, Caspase9, Bax), apoptosis inhibitor Bcl-2 as well as antioxidative molecules GSH and SOD in elderly and young-middle aged dogs, and to explore the possible connection between aging and liver function, so as to provide theoretical base for liver protection among elderly clinically.

METHODS: The 15 healthy dogs were divided into young-middle aged group (n=8) and elderly group (n=7). Hepatic cell changes of liver were observed with HE. Protein expressions of Caspase3, caspase9, Bax, Bcl-2 were determined by ELISA. The expression of GSH and SOD was assessed by biochemical
methods.

RESULTS: Protein expression of Caspase9 is higher (3.362±0.096 vs 3.561±0.125, t=3.493, p=0.004<0.05). Expression of Bax (4.703±0.249 vs 4.325±0.174, t=3.445, p=0.001<0.05), Bcl-2(7.725±0.177 vs 7.198±0.286, t=4.209, p=0.001<0.05) and GSH (16.918±1.014 vs 18.726±1.326, t=2.929, p=0.012<0.05) has similar tendency. Caspase3 and SOD between groups are not statistically different.

CONCLUSION: Decline of hepatic cells during aging may be connected with the changes of apoptosis promoters and inhibitors in elderly dogs. Decrease of antioxidative molecules, such as GSH, may be one reason of the weakness of liver ability.

P157 Elevated 8-hydroxy-2'-Deoxyguanosine in Patients with COPD

S. F. Yang, J. Wu, X.L. Gao, Department of Respiratory Diseases, Guangdong People’s Hospital, Institute of Geriatrics of Guangdong, Guangzhou 510080, China

BACKGROUND: Oxidative stress is a critical process in chronic obstructive pulmonary disease (COPD). 8-hydroxy-2'-deoxyguanosine (8-OHdG) is an important marker of cellular oxidative DNA damage. The purpose of this study was to investigate whether 8-OHdG increased in the peripheral blood lymphocytes of COPD cases, and to estimate the association between 8-OHdG levels and risk of COPD.

METHODS: In the current study, 8-OHdG was detected by high press liquid chromatography with electrochemical detection in peripheral blood lymphocyte of 196 COPD cases and 216 healthy controls.

RESULTS: In this study it was found that the levels of 8-OHdG were significantly higher in COPD cases (5.32(0.74-27.43)/10^5dG) than those in controls (4.32(0.59-20.31)/10^5dG). Stratified analyses showed that higher levels of 8-OHdG was found in smoking cases (6.83(1.39-27.43)/10^5dG) than that in smoking controls (4.35(1.25-20.31)/10^5dG). 8-OHdG levels were significantly correlated with the number of cigarettes smoked per day and the age of smoking initiation (P<0.001). When the median 8-OHdG level of controls (4.32/10^5dG) was used as the cutoff point, 62% of cases had higher levels (OR; 95%CI: 1.58; 1.07-2.34; P<0.001), and 72% of smoking cases had higher levels (OR; 95%CI: 2.21. 1.34-3.64; P<0.001). A multivariate logistical regression model to adjust for all possible confounders showed that the levels of 8-OHdG was an independent predictor of COPD risk (OR; 95%CI: 1.13; 1.05-1.15; P<0.001).

CONCLUSIONS: Patients with COPD had higher DNA oxidative damage. And 8-OHdG might be a useful biomarker to evaluate the risk of COPD.

P158 Remodeling of Gallbladder Artery and Altered Expression of Calcium Handling Genes in Hypertensive Patients

Q. H. Shang, X. Y. Jia, C. Liu, Institute of Clinical Medicine, Institute of Cardiovascular Disease and Hypertension Research Lab, Department of Cardiology of Affiliated Hospital, Zunyi Medical College,
OBJECTIVE: The remodeling of gallbladder artery in hypertensive patients and its underlying mechanisms are poorly understood. The present study aimed to observe the morphological and histological changes of gallbladder arteries and to investigate the mechanisms of calcium handling genes involved in remodeling.

METHODS: A total of 44 patients with biliary calculus underwent cholecystectomy during the period of Jun, 2011 to Mar, 2012. Among them, 21 patients without risk factors were selected according to age and sex-matched method, and divided into control group (n=11, normal blood pressure) and hypertensive group (n=10). HE staining and Masson staining were used to observe the morphology changes of arteries. The intima-media thickness (IMT), intimal cross-sectional area (ICSA), medial cross-sectional area (MCSA), collagen volume fraction (CVF) of intima and media was analyzed by computer image analysis system. The protein expressions of α-smooth muscle actin (α-SMA) and proliferating cell nuclear antigen (PCNA) were detected by immunohistochemical technique. The mRNA expression levels of embryonic smooth muscle myosin heavy chain (SMemb) and calcium handling genes were detected by Realtime PCR.

RESULTS: Compared with control group, IMT (79.5±4.7 vs 51.2±4.3 µm), intima-media thickness to internal diameter ratio (IMT/ID) (0.25±0.02 vs 0.17±0.01), ICSA to internal diameter ratio (ICSA/ID) (67.7±9.2 vs 39.6±8.7) and MCSA to ID ratio (MCSA/ID) (242.4±20.7 vs 153.3±19.7) were increased in hypertensive group (all P<0.05). Compared with control group, in intima or media of artery, CVF (0.36±0.03 vs 0.17±0.03; 0.36±0.02 vs 0.28 ±0.02, all P<0.05) and cell proliferation index (0.61±0.05 vs 0.36±0.05; 0.73±0.05 vs 0.54±0.05, all P<0.01) were increased in hypertension subjects; In media of artery, the gene expression of SMemb, sodium pump α1 subunit and transient receptor potential canonical channel type 1 (TRPC1), TRPC3 were increased, while sodium pump α3 subunit and plasma membrane calcium-transporting ATPase 4 were decreased in hypertensive group (all P<0.05).

CONCLUSION: This study provides evidences that hypertension is associated with the remodeling of the gallbladder artery. The phenotypic change of vascular smooth muscle cell and the abnormal expression of the calcium handling genes may play an important role in the arterial remodeling.

P159
Interactions of High Salt and Family History of Hypertension on the Gene Expression of TGF-β1/Smads, Ion Pumps and TRPCs in Human Umbilical Artery Smooth Muscle Cells

Q. H. Shang, J. Fan, C. Liu, Institute of Clinical Medicine, Institute of Cardiovascular Disease and Hypertension Research Lab, Department of Cardiology of Affiliated Hospital, Zunyi Medical College, Guizhou 563000, China

OBJECTIVE: High-salt intake and family history of hypertension are involved in the pathogenesis of hypertension and vascular remodelling. This study examined the interactions of high salt and family history of hypertension on the gene expression of TGF-β1/Smads, Ca²⁺ regulation-related ion pumps and transient receptor potential canonical channels (TRPCs) in human umbilical artery smooth muscle cells (hUASMCs).

METHODS: Fourteen normal fetal umbilical cords were taken, which derived from 7 cases with positive family history of hypertension (FH⁺) and 7 cases with negative family history of hypertension...
The hUASMCs were cultured by tissue explants adherent method, and were randomly divided into the normal salt medium (DMEM with a Na⁺ final concentration of 139 mmol/L) and high salt medium (Na⁺ final concentration of 164 mmol/L contained additional sodium chloride) at FH⁺ and FH⁻ level, respectively. Smooth muscle cell-specific α-actin was observed through the immunocytochemical method. The real-time PCR was employed to detect the gene expression of transforming growth factor beta-1 (TGF-β1), Smad2, Smad3 and Smad7, Na⁺-K⁺-ATPase α₁-subunit, α₂-subunit and α₃-subunit, plasma membrane Ca²⁺-ATPase isoform 1 (PMCA1) and PMCA4, as well as TRPC1, TRPC3 and TRPC6. Factor analysis method was used to evaluate the interactions of family history of hypertension and high salt on above gene expression.

RESULTS: There was interaction between family history of hypertension and high salt on the mRNA expressions of α₁-subunit, α₂-subunit, PMCA1 and TRPC3 (P<0.05), but no interaction on TGF-β1/Smads, α₃-subunit, PMCA4, TRPC1 and TRPC6. Without interacting, family history was the main effect of TGF-β1, α₃-subunit, TRPC6 (P<0.05) and high salt was the main effect of Smad3, PMCA4, TRPC1 (P<0.05). Both family history and high salt affected Smad7 mRNA expression (P<0.05). With interacting, family history and high salt had negative interaction on the gene expressions of α₁-subunit, α₂-subunit and PMCA1 (P<0.05), while positive interaction on TRPC3 mRNA. For the main effect of family history, compared with FH⁻, the mRNA expressions of TGF-β1 and TRPC6 were increased in FH⁺ (P<0.05), and in contrast, Smad7 and α₃-subunit decreased (P<0.05). For the main effect of high salt, the gene expressions of Smad3 and TRPC1 were higher in high salt than in normal salt (P<0.05) while Smad7 and PMCA4 lower (P<0.05).

CONCLUSIONS: Family history of hypertension may affect the mRNA expressions of α₃-subunit and TRPC6 while high salt affect the mRNA expressions of PMCA4 and TRPC1. Family history and high salt may co-regulate the mRNA expressions of TGF-β1/Smads, α₁-subunit, α₂-subunit, PMCA1 and TRPC3 in hUASMCs.

P160
Updates on Treatment and Secondary Prevention of Coronary Heart Disease in Older Female Persons in China

H. P. Hui¹, F. Jin¹, D. W. Yin¹, Q. Q. Meng², L. Wang³, Z. J. Jian⁴, X. P. Tuo⁵, X. Y. Li¹, ¹ Department of Geriatric Cardiology, Chinese PLA General Hospital, Beijing 100853, China; ² Health Bureau of the PLA General Staff; ³ Department of Geriatrics, Second Affiliated Hospital of Tianjin Medical University; ⁴ Department of Geriatrics, The Second Xiangya Hospita, of Central South University; ⁵ Department of Geriatrics, Changhai Hospital, Shanghai

OBJECTIVE: The study aimed to investigate the present situation on therapy and secondary prevention of coronary heart disease (CHD) in the female elderly.

METHODS: Cross sectional, non-intervention and multicenter survey was used. 2872 female elderly patients (≥ 60 years) from 116 hospitals of 21 provinces and cities were interviewed by questionnaire from April to July of 2011. Their average age was 72±7.4 years.

RESULTS: (1) All cases were given drugs and PCI or surgery, 27.5% cases of PCI and 2.6% of CABG. (2) The ratio of cases with angina pectoris and myocardial infarction was 76.5%, the attack of angina pectoris ≥ 3 times/week in recent month was 47.9%. Canadian Cardiovascular Society (CCS) II scores and over was 75.3%. (3) The utility ratio of relative drugs was as 70.3%, Aspirin, 35.3% Clopidogrel, 54.9% statins, 64.2% nitrate, 47.5% β-blocker, 29% ACEI, 22.2% ARB. (4) The situation of risk factor
control among all the cases was: 37.3% of them with active and passive smoking, 56.5% with BMI ≥ 24kg/m², 41.1% with waistline ≥ 85cm, 65.8% with hypertension and only 55.1% of hypertensive patients achieved the level of blood pressure<140/90mmHg, and 24.2% with Diabetes and only 44.5% of Diabetic patients achieved the level of HbA1c< 6.5%, and 32.7% with Lipids disorder and only 22.4% with Hyperlipidemia patients achieved the level of TC<4.14mmol/L and 21.3% of LDL-C<2.59mmol/L.

CONCLUSIONS: Inadequate control of symptoms, insufficient drug use and control of risk factors appear to continuously be a significant problem in treatment and secondary prevention of CHD for older female persons in China.

PI61
Heat Shock Protein 60 Was Involved in Behavioral Improvement in 6-hydroxydopamine Induced Parkinson’s disease Rats Transplanted with Human Umbilical Cord Mesenchymal Stem Cell-derived Dopaminergic Neurons

C. Zhao, H. Li, M. J. Feng, Department of Geriatrics, the Second Affiliated Hospital, Nanjing Medical University

OBJECTIVE: To investigate the therapeutic effects and possible mechanism of transplanting human umbilical cord mesenchymal stem cells (HUMSCs)-derived dopaminergic neurons in a rat model of Parkinson’s disease (PD).

METHODS: HUMSCs were induced to differentiate into dopaminergic neurons by two-step way, and the expression of β-Tubulin III, neuronal nuclei antigen (NeuN) and Tyrosine hydroxylase (TH) were detected by immunocytochemistry. PD rat models were induced by 6-hydroxydopamine (6-OHDA). Rats were randomly assigned to four groups with six rats in each group: the sham group, the control group, the HUMSCs group and the HUMSCs-derived dopaminergic-neuron group. Intracranial injection was taken with DMEM/F12, HUMSCs and HUMSCs-derived dopaminergic-neurons for the last three groups, respectively. The rotation test was examined at week 2 and 4 after transplantation. Western blotting was performed at week 4 and 6.

RESULTS: Immunofluorescence showed no expression of NeuN and TH in the HUMSCs, but positive staining was found in the dopaminergic neurons in vitro. The rotation per minute decreased significantly in the HUMSCs and HUMSCs-derived dopaminergic neuron groups compared with the other two groups (P<0.05) in vivo. The expression of Hsp60 protein levels increased significantly in these two transplantation groups compared with the control group (P<0.05).

CONCLUSIONS: HUMSCs can be stably induced and differentiated into dopaminergic neurons, which can express NeuN and TH in vitro. Transplantation of HUMSCs-derived dopaminergic neurons showed behavioral improvement in rats, suggesting a promising therapeutic potential in PD. Hsp60 may be involved in its treatment mechanism.

PI62
Effect of Aging on Structure, Ultrastructure and H+/K+ ATPase Activation of Fundic Gland in Beagle Dogs
OBJECTIVE: To investigate whether the structure, ultrastructure and hydrogen potassium adenosine triphosphate (H\(^+/K^+\) ATPase) activation of beagle dogs parietal cells were associated with aging.

METHODS: Totally, 19 beagle dogs were enrolled, which were divided into three age groups, with 8 in the younger group (aged 1–4 years), 5 junior elderly group (aged 6–9 years) and 6 senior elderly group (aged >9 years). The amount of parietal cells was visualized by histology. The ultrastructure was determined by electron microscopy, and the activation of H+/K+ ATPase was detected.

RESULTS: The amount of parietal cells was not reduced with aging (P>0.05), while the amount of chief cells significantly decreased in senior elderly group per high-power field [(328.37±11.44), (225.66±21.30), F=13.647, P=0.000]. Electron microscopy images showed no distinct difference in the morphology and distribution of parietal cells or the acid secretion-related organelle among the three groups (P>0.05), while the area percentage of organelles in chief cells which secrete pepsin decreased significantly with aging [(58.83±3.07)%, (52.34±4.7)%, (39.89±4.46)%, F = 38.837, P = 0.000]. The ultra structures of epithelial cells and tight junctions had no significant changes, while middle junctions and gap junctions had gradually loosened with aging. The activation of H+/K+ ATPase showed no age-related alteration (P>0.05).

CONCLUSION: Acid secretion-related cells, organelles and activation of H+/K+ ATPase do not degenerate with aging, while pepsin secretion-related factors decrease with age, indicating healthy elderly individuals may have intact molecular biological basis for acid secretion but not pepsin secretion.

P163
scAAV5-mediated Gene Transduction of Novel CD40L Mutant Enhances Direct Antitumor Effects in Lung Carcinoma

W. Xu, J. Q. Wu, W. H. Zhao, Y. Li, F. Zong, H. Wang, Department of Geriatrics, The First Affiliated Hospital of Nanjing Medical University, 210029, China

BACKGROUND: CD40L gene therapy offers an attractive option for lung cancer because of its multiple antitumor activities. However, membrane-bound CD40L may be proteolytically cleaved to form soluble CD40L (sCD40L), which leads to adverse effects. We previously showed that recombinant self-complementary adeno-associated virus 5 (scAAV5) efficiently delivered gene to lung cancer cells. The current study aimed to generate scAAV5 expressing non-cleavable human CD40L mutant (scAAV5-CD40L-M) and to explore the direct antitumor effect in lung cancer.

METHODS: The experimental studies were conducted using scAAV5-CD40L-M to transduce CD40-positive and CD40-negative lung cancer cells. CD40L expression on cell surface, cell proliferation rate, cell cycle distribution, apoptosis and the amount of sCD40L were evaluated in vitro. Human tumor xenografts in immunodeficient mice were established by subcutaneously implanting tumors derived from A549 cells. scAAV5-CD40L-M was administered via intratumoral injection every 5 days.

RESULTS: Transduction with scAAV5-CD40L-M effectively expressed CD40L on the cell surface with little cleaved sCD40L, which significantly reduced the percentage of viable cells, induced G0/G1 phase arrest and promoted caspase-3-dependent apoptosis in CD40-positive A549 cells compared with
scAAV5-CD40L transduction (P < 0.05, respectively). In addition, the treatment with scAAV5-CD40L-M exerted a significant antitumor effect against the CD40-positive A549 xenografts by inducing apoptosis (P < 0.05) with less side effect.


P164

Light to Moderate Alcohol Consumption Might Be a Risk Factor for Angina Attack in Elderly Chinese Patients with Coronary Heart Disease

H. Wang, Y. Shi, Y. T. Wang, Y. T. Guo, J. Fan, X. Y. Li, First Geriatric Cardiology Division, Chinese PLA general Hospital, Beijing 100853, China

OBJECTIVE: The present study was to investigate the association between light-moderate alcohol consumption and risk of angina attacks in elderly Chinese patients with coronary heart disease (CHD).

METHODS: A total of 1453 participants (60 – 92 years) with CHD (525 female and 928 male) were divided into two groups with and without self-reported angina attacks. Clinical profiles were collected. Risk factors for angina attack were investigated by binary logistic regression analysis.

RESULTS: Patients with self-reported angina attacks who had higher heart rate (HR), systolic blood pressure (SBP), and diastolic blood pressure (DBP), were more likely to have hypertension, a history of past percutaneous coronary intervention (PCI) and dyslipidemia, and were more willing to exercise compared to those without such attacks. More patients with self-reported angina attacks were on nitroglycerin, long-acting nitrates, angiotensin converting enzyme (ACE) inhibitors, and dual antiplatelet (Aspirin + Clopidogrel) therapy. There was no difference in light-moderate alcohol consumption between the two groups. Binary logistic regression indicated that age (OR, 95%CI, 1.024, 1.006 – 1.024, P = 0.009), SBP (OR, 95%CI, 1.009, 1.001 – 1.017, P = 0.029), and light-moderate alcohol consumption (OR, 95%CI, 1.446, 1.026 – 2.038, P = 0.035) were risk factors for angina attack, whereas nitroglycerin (OR, 95%CI, 0.069, 0.052 – 0.092, P < 0.001) and dual antiplatelet (Aspirin + Clopidogrel) therapy (OR, 95%CI, 0.456, 0.296 – 0.702, P < 0.001) had protective roles against angina attack.

CONCLUSION: Light to moderate alcohol consumption was associated with increased risk of angina attack in elderly patients with CHD. These patients should be cautious of alcohol consumption.

P165

Efficacy and Safety of New Oral Anticoagulant Drugs ----- a Network Meta-analysis

W. B. Fu, H. Y. Guo, J. P. Guo, K. Lin, H. J. Wang, Y. Zhang, Y. T. Wang, Z. L. Shan, Nankai University School of Medicine, Nankai University, Tianjin 300071, China; Department of Cardiology, Chinese PLA General Hospital, Beijing 100853, China

BACKGROUND: Many direct evidences have proved that the novel oral anticoagulants (NOACs) were non-inferior or superior to warfarin for stroke prevention in patients with non-valvular atrial fibrillation (AF). However, there is still controversy regarding their relative efficacy and safety. The aim of this study was to perform a network meta-analysis (NMA) to compare the efficacy and safety of NOACs with warfarin in AF patients.
fibrillation (AF), and led to a clinically relevant decrease in bleeding profiles. However, there was no study comparing NOACs with each other head-to-head. The current study was a network meta-analysis aiming to assess the efficacy and safety of NOACs.

**METHODS:** Randomized controlled trials (RCTs) of NOACs with warfarin in stroke prevention published in the Cochrane library, Pubmed NCBI, EMBASE and MEDLINE were systematically searched. The primary outcome was the rate of stroke or systemic embolism, and the secondary outcome was the rate of bleeding events. Network meta-analysis (NMA) was performed using Markov chain Monte Carlo methods.

**RESULTS:** A total of 4 phase III RCTs (n= 71683) met our inclusion criteria. All NOACs except low dose of edoxaban showed similar efficacies in stroke prevention. In the field of hemorrhage, apixaban had less major bleeding events compared with dabigatran 150 mg and rivaroxaban. Edoxaban 60mg showed less gastrointestinal bleeding than dabigatran 150 mg and rivaroxaban. Apixaban appeared to be better than edoxaban 60 mg only in any bleeding events.

**CONCLUSION:** NOACs are promising candidates for stroke prevention in patients with non-valvular AF due to a favourable risk-benefit profile. All NOACs other than edoxaban 30mg had parallel efficacies in the respect of stroke prevention. Apixaban and edoxaban 60 mg has an advantage over the other NOACs in safety, and additionally, apixaban is safer than edoxaban 60 mg in any bleeding events.

**The Pathophysiological Characteristics of Cognitive and Physical Frailty in Older Male Adults**

Z.W. Yu, Q.W. Ruan, Z.J. Bao, J. Li, C. Ma, H.F. Ma, Y.X. Ma, Department of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, Shanghai, 200040, China; Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Geriatrics and Gerontology, Shanghai 200040, China; Research Center of Aging and Medicine, Shanghai Key Laboratory of Clinical Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, Shanghai 200040, China

**BACKGROUND:** Cognitive frailty is a heterogeneous clinical syndrome characterized by the simultaneous presence of both physical frailty and cognitive impairment. The pathophysiological characteristics of cognitive frailty are little known. We designed an experiment to investigate the pathophysiological differences among robust, cognitive frailty and frailty older adults.

**METHODS:** Data are from a cohort study of 374 male subjects (65~97 year-old) with complete medical history. Cognitive frailty was assessed by screening test such as The Rapid Cognitive Screen (RCS), FRAIL questionnaires, and Mini-Mental Status Examination (MMSE). The subjects were divided into three groups: frailty group (FRAIL 1-5), cognitive frailty group (FRAIL 1-5, MMSE 24–27 and RCS 6-7), and robust older adult group (FRAIL 0, MMSE≥28 and RCS 8-10). Each group was further divided into two subgroups according to age (≥65 and ≤84, ≥85). Plasma from 1-mL fasting peripheral blood samples was collected for 10 minutes in the morning and rapidly stored at -800 C. The peripheral blood mononuclear cells were isolated and examined by flow cytometry with different antibodies against immune cells from 4 ml fasting peripheral blood samples. The values of TCH, TG, HDL-C and LDL-C, thyroid function (FT3, FT4, T3, T4 and TSH), the ratio of CD4+T cell and CD8+ T cell, the percentage of CD3, B cell and NK cell in peripheral blood were detected.
Two-way ANOVA was used to compare the differences of lipoprotein and immune cell component, and thyroid function among the different experimental groups. A p value < 0.05 was considered statistically significant.

**RESULTS:** Phenotype factor had a significant effect on the values of TCH (F2,368=3.19, p = 0.043), whereas age factor and their interaction did not. Robust older adults had significant high TCH value compared to other groups (p = 0.017 and 0.025 respectively), but not between cognitive frailty and frailty older adult group. Phenotype factor and age factor had significant effects on the values of TG (F2,369=3.42, p = 0.034; F1,369=4.68, p = 0.031) and HDL-C (F2,368=3.86, p = 0.022; F1,368=16.12, p < 0.001), but not their interaction. Robust older adult had lower TG values (1.26±0.12) compared to cognitive frailty (1.44±0.084) and frailty groups (1.6±0.07), and higher HDL-C value (1.12±0.037) compared to cognitive frailty (1.02±0.025) and frailty groups (1.00±0.02). Phenotype factor also had a significant effect on LDL-C value (F2,368=4.59, p = 0.011). However, Robust older adult had higher LDL-C value (3.04±0.11) compared to cognitive frailty (2.77±0.077) and frailty groups (2.65±0.061). There was no significant difference in the percentage of CD3+T cell, B cell and NK cell, the ratio of CD4+ and CD8+ T cell, among three phenotype groups. Age factor had significant effects on the values of FT3 (F1,142=6.84, p = 0.01) and T3 (F1,142=13.6, p < 0.001), and phenotype factor had a significant effect on the values of TSH (F2,369=3.19, p = 0.043). The values of both FT3 and T3 were decreased with the increase in age, and robust older adult had higher TSH value compared to other two phenotype groups.

**CONCLUSIONS:** Our findings demonstrate that there are significant differences in lipid metabolism and thyroid function among three phenotype subjects.

**P167**

High Plasma Oxidative, Inflammatory Status in Older Male Adults with Cognitive Impairment and Physical Frailty

Q. W. Ruan23, Z. J. Bao3, J. Li1, C. Ma12, Z. W. Yu123, 1 Department of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, Shanghai, 200040, China; 2 Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Geriatrics and Gerontology, Shanghai 200040, China; 3 Research Center of Aging and Medicine, Shanghai Key Laboratory of Clinical Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, Shanghai 200040, China

**BACKGROUND:** Oxidative stress and chronic inflammation play critical role in frail and cognitive impairment in the elderly. We hypothesized that a high body's oxidative and inflammatory status were associated with cognitive frailty.

**METHODS:** Data were from a cohort study of 374 male subjects (65~97 years old) with complete medical history. Cognitive frailty was assessed by screening test such as The Rapid Cognitive Screen (RCS), FRAIL questionnaires and Mini-Mental Status Examination (MMSE). The subjects were divided into three groups: frailty group (FRAIL 1-5), cognitive frailty group (FRAIL 1-5, MMSE 24~27 and RCS 6-7), and robust older adult group (FRAIL 0, MMSE≥28 and RCS 8-10). Each group was further divided into two subgroups according to age (≥65 and ≤84, ≥85). Plasma from 1 mL fasting peripheral blood samples was collected for 10 minutes in the morning and rapidly stored at -80o C. The values of LPO, POD, CAT, SOD, GSH-px and cytokines in plasma were detected by using ELISA KIT or Bioplex ProTM cytokine assays. Two-way ANOVA was used to compare anti-oxidant,
inflammatory among the different experimental groups. A p value < 0.05 was considered statistically significant.

RESULTS: The results showed that the value of CAT was significantly high in robust older adults (55.37± 1.98 activity unit) when compared with frailty group (49.71±1.11U) and cognitive group (52.57±1.32 U) (p < 0.05), but not between frailty and cognitive frailty group (F_{2,320} = 3.53, p = 0.03).

Age factor and the interaction between phenotype and age had no significant effect on body’s oxidative and inflammatory status in older adults. There were no significant differences in the values of LOP, POD, and GSH-px among experimental groups. Phenotype factor, age factor, and their interaction had significant effects on the value of IL-6 (F_{1,315}=4.95, p = 0.027; F_{2,315} = 8.65, p < 0.001; F_{2,315}=6.67, p = 0.001). Age factor and their interaction had significant effects on the value of IL-10 (F_{1,270}=4.54, p = 0.034; F_{2,270}=4.82, p = 0.009). Phenotype factor also had a significant effect on the value of RANTs (F_{2,304}=3.24, p = 0.04). A high pro-inflammatory cytokine, such as IL-6, RANTs and low anti-inflammatory cytokine, such as IL-10 could be observed in frailty and cognitive frailty older adults.

CONCLUSIONS: Our findings demonstrate that a high oxidative and inflammatory status in plasma was associated with cognitive and physical frailty in older adults.

P168
Plasma Apolipoprotein Levels are Associated with Cognitive and Physical Frailty in Older Male Adults

C. Ma¹, J. Li¹, Z. J. Bao³, Z. J. Gao³, Q. W. Ruan², Z. W. Yu¹, ¹Department of Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, Shanghai, 200040, China; ²Department of Aging, Antiaging and Cognitive Function, Shanghai Institute of Geriatrics and Gerontology, Shanghai, 200040, China; ³Research Center of Aging and Medicine, Shanghai Key Laboratory of Clinical Geriatrics, Huadong Hospital, Shanghai Medical College, Fudan University, Shanghai 200040, China

Supported By: Shanghai Key Laboratory of Clinical Geriatric Medicine Subject Construction (No.13dz2260700) and Shanghai Hospital Development Center Grant (No. SHDC12014221)

BACKGROUND: Apolipoproteins have been recognized as the risk factors which are related to cognitive impairment, including mild cognitive impairment, Alzheimer's disease and dementia. We examined a series of apolipoproteins in the plasma to estimate how the apolipoprotein levels are associated with different phenotype in older male adults.

METHODS: Data were from a cohort study of 261 male subjects (65~97 years old) with complete medical history. Cognitive frailty was assessed by screening test such as The Rapid Cognitive Screen (RCS), FRAIL questionnaires and Mini-Mental Status Examination (MMSE). The subjects were divided into three groups: frailty group (FRAIL 1-5), cognitive frailty group (FRAIL 1-5, MMSE 24~27 and RCS 6-7), and robust older adult group (FRAIL 0, MMSE≥28 and RCS 8-10). Each group was further divided into two subgroups according to age (≥65 and ≤84, ≥85). Plasma from 2-mL fasting peripheral blood samples was collected for 10 minutes in the morning and rapidly stored at -80°C. The levels of different apolipoproteins were detected by using ELISA KIT (ApoJ and ApoH) or The Luminex 200TM System cytokine assays (ApoA1, ApoA2, ApoB, ApoC2, ApoC3). Two-way ANOVA was used to compare apolipoprotein concentrations among the different experimental groups. A p value < 0.05 was considered statistically significant.
RESULTS: The study suggested that the levels of some apolipoproteins were significant different among those three study groups. The levels of ApoA2 ($F_{1,193}=4.885$, $p=0.046$), ApoC2 ($F_{1,193}=6.065$, $p=0.015$) and ApoC3 ($F_{1,193}=5.539$, $p=0.02$) showed great disparities in different age subgroups. The level of ApoB ($F_{2,193}=3.985$, $p=0.02$) was quite related with older adult with different phenotype. Age factor and interaction between phenotype factor and age factor had significant effects on the level of ApoA1 ($F_{1.193}=13.13$, $p<0.001$; $F_{2.193}=4.89$, $p = 0.009$ respectively). The phenotype factor, age factor and their interaction did not have significant effect on the levels of ApoJ and ApoH according to our study.

CONCLUSION: These findings suggest that the plasma apolipoprotein levels are highly associated with cognitive and physical frailty.

PI69
The Effect of Klotho Gene Transfection on H9C2 Hypertrophy Induced by FGF2 and its Mechanisms

Y. K. Li, H. X. MA, Q. C. Yan, X. Q. Deng, Y. Tang, P. Wu, Department of Geriatrics, the First Affiliated Hospital of Chongqing Medical University, Chongqing 400016, China

OBJECTIVE: The paper aimed to investigate the effect of klotho (KL) gene on myocardial hypertrophy induced by basic fibroblast growth factor-2 (FGF-2) and its mechanism.

METHODS: Cultured H9c2 rat cardiomyocytes were transfected by liposome-mediated mouse KL gene. FGF-2 induced cardiomyocyte hypertrophy was used as the model in this research. The experiment was divided into 6 groups: control group, myocardial hypertrophy group, empty vector transfected KL genome, BGJ3981 group, BGJ3981 combined with KL intervention group. After treatment, the expression of KL in H9c2 was detected by RT-PCR, immunofluorescence and ELISA. The morphologies of H9c2 myocardial cell was observed by inverted fluorescence microscope. The expression of atrial natriuretic peptide (ANP) and $\alpha$-actin were detected by RT-PCR and Western blot analysis. The expression of PI3K, phosphorylation of PI3K (p-PI3K), AKT, phosphorylated AKT (p-AKT) were detected by western blot analysis.

RESULTS: KL liposome-mediated gene transfection in H9c2 cardiomyocytes significantly reduced the expression of $\alpha$-actin protein and ANP was triggered by FGF2 ($t=7.975$, $t=16.145$, $P<0.05$). After transfected with KL gene, the expression of outside KL -derived genes was up-regulated, and the phosphorylation of AKT and PI3K induced by FGF2 was significantly inhibited ($t=4.105$, $t=9.719$, $P<0.05$). The expression of p-PI3K and p-AKT in KL transfected group, BGJ398 intervention group, KL transfected with BGJ398l joint intervention group compared with myocardial hypertrophy group ($t=9.719$, $t=4.546$, $t=4.376$, $P<0.05$) which decreased in the first three groups ($t=0.1$, $t=0.14$, $t=0.28$, $P>0.05$) showed no significant difference.

CONCLUSION: KL can inhibit FGF2 -induced cardiac hypertrophy. Its mechanisms may be associated with that KL can suppress basic fibroblast growth factor receptor 2(FGFR2) signaling cascade, and then inhibite the activation of PI3K and AKT.

P170
Relationship between Socioeconomic Status, Mental Health and Need for Long-term Care: A Follow-up Study among the Japanese Elderly
OBJECTIVE: This study was carried out to explore the structural causality between the socioeconomic status (SES), mental health and the need for long-term care (NLTC) of the Japanese elderly, with the aim of providing useful information to lower the NLTC.

METHODS: A follow-up survey was carried out in Tama City, Tokyo in 2001 and 2004. Data were collected from the urban-dwelling elders, aged 65 years old and above, through self-reported questionnaires, which was participated by 7,905 respondents (47.6% male and 52.4% female). Kendall tau-c correlation analysis and structural equation modeling (SEM) were used to identify the causality between SES, mental health and NLTC.

RESULTS: Based on the SEM analysis, the correlation between mental health and NLTC was found to be negative both in 2001 and 2004. The SES in 2001 could not only positively and directly affect the NLTC 2004, but also exerted a negative and indirect effect on NLTC 2004. A significant and positive relationship was also observed between SES and mental health among the Japanese elderly. The structural relationship between SES, mental health and NLTC was clarified.

CONCLUSION: It demonstrated the important role of SES and mental health on lowering the NLTC.

P171
Relationship between Diabetes Mellitus and Primary Hepatic Carcinoma in Patients with Tumor Multiple Metastasis

J. Qin, H. Liu, Department of Geriatric Endocrinology, the First Affiliated Hospital of Guangxi Medical University, Guangxi 530021, China

OBJECTIVE: To explore whether primary hepatic carcinoma with diabetes mellitus can increase the risk of tumor multiple metastasis.

METHODS: According to with or without diabetes mellitus, 320 patients with primary hepatic carcinoma were divided into two groups and analyzed by chi-square test. Tumor multiple metastasis included intrahepatic metastasis, osseous metastasis, pulmonary metastasis, pelvic metastasis etc. That refers to two or more than two tumor metastases.

RESULTS: Among 320 patients with primary hepatic carcinoma, tumor multiple metastasis occurred in 6 patients (5.30%) of 113 patients (35.3%) with diabetes mellitus and 2 patients (0.97%) of 207 patients (64.7%) without diabetes mellitus. There was a significant difference between two groups (P=0.045). Intrahepatic metastasis, multiple of distant metastasis, osseous metastasis and other parts of distant metastasis occurred in the patients with primary hepatic carcinoma and diabetes mellitus were more than that in the patients with primary hepatic carcinoma, P <0.05.

CONCLUSION: Diabetes mellitus can increase the risk tumor multiple metastasis in patients with primary hepatic carcinoma. The patients suffering from diabetes with primary hepatocellular carcinoma will have a greater risk of tumor metastasis.
P172
The Value of Microvolt T-wave Alternans for the Prediction of Mortality in Heart Failure Patients: a Meta-analysis

X.Q. Quan, G.T. Zhang, Department of Geriatrics, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 430030, China

OBJECTIVE: A meta-analysis of the value of microvolt T-wave alternans (MTWA) testing for test severe arrhythmic events was conducted to predict mortality in heart failure patients.

METHODS: Prospective studies of the predictive value of exercise-induced MTWA published between January 1990 and February 2014 were retrieved. Heterogeneity was analyzed with $\chi^2$ and $I^2$. Pooled hazard ratio (HR) as the effect indicator and 95% confidence interval were used to estimate the association of MTWA and risk of severe arrhythmic events and death by fixed effect model (inverse variance method).

RESULTS: Data were accumulated from 6 studies involving a total of 2,320 patients, including 403 positive, 766 negative, 296 indeterminate, and 855 non-negative (which included both positive and indeterminate tests) MTWA test results. The risk of severe arrhythmic events or mortality was higher in patients with an abnormal MTWA compared to a negative test (HR=2.748, 95% confidence interval=1.531 to 4.930, $P=0.001$).

CONCLUSION: MTWA testing is significant for the prediction of severe arrhythmic events or mortality in heart failure patients.

P173
Study on the Correlation between UA and Cystatin C with Coronary Lesions in Patients with Coronary Artery Disease

J. Zhang, H. Liu, Department of Geriatric Endocrinology, the first Affiliated Hospital of Guangxi Medical University, Nanning, Guangxi 530021, China

OBJECTIVE: To investigate the correlation between serum levels of UA and cystatin C with coronary arteries lesions.

METHODS: 468 patients with suspected CHD who underwent coronary angiography (CAG) were retrospectively analyzed. Among the patients there were 363 cases with CHD. Serum uric acid and cystatin C of all patients were measured. Severity of CHD was scored using the Gensini score. Correlation of UA, cystatin C levels and severity of CHD with lesions of coronary arteries was analyzed.

RESULTS: ① Serum UA, cystatin C level were significantly higher in CHD group (T=1.615, T=0.482, $P<0.05$). ② The more coronary lesions was, the higher serum level of UA and cystatin C, and the differences have statistical significances ($X^2=50.502$, $X^2=4.966$, $P<.01$ $P<0.$). ③ AS the coronary artery Gensini score increased, the UA, Cys C levels showed an increasing trend in CHD patients (F=1.39, $F=0.575$, $P<.01$ ). The UA, Cys C levels were positively correlated with the Gensini score of CHD severity ($r=0.602$, 0.233, $P<0.01$).

CONCLUSION: UA, cystatin C level are significantly correlated with the severity of CHD and the
number of coronary arteries, both UA and cystain C level can be used as markers in assessing the severity of CHD.

**P174**

**Characteristics of Coronary Artery Disease in the Elderly Patients with ST-segment Elevation Myocardial Infarction (STEMI) and Hyperuricemia**

P. Fan, G. Liu, *Department of Cardiology of the First Hospital of China Medical University 110001, China*

**OBJECTIVE:** This article aimed to discuss the relationship between hyperuricemia and the severity of coronary artery disease in the elderly group with ST-segment elevation myocardial infarction (STEMI).

**METHODS:** The retrospective study consisted of 451 patients diagnosed with STEMI and operated by coronary angiography for the first time. According to the age, the patients were divided into 2 groups: the elderly group (≥60 years old, 210 cases), the young and middle-aged group (< 60 years old, 241 cases), and according to the serum uric acid level (male > 420 umol/l, female > 360 umol/l), the patients were also divided into 2 groups: hyperuricemic group and normouricemic group. Their basic information and the severity of coronary artery disease were compared. Multiple linear regression of severity of coronary artery disease was used to investigate the relationship between serum uric acid and the severity of coronary artery disease.

**RESULTS:** In the elderly group, Gensini score of hyperuricemic group was significantly higher than that of normouricemic group (110.5±52.2 vs 88.3±43.3 umol/l, p < 0.05), while in the young and middle-aged group, Gensini score was not statistical different in the above two groups (72.5±42.5 vs 72.8±36.7 umol/l, p > 0.05). Between the serum uric acid groups, they both showed no statistical significant differences in the elderly group and the young and middle-aged group (p < 0.05).

In the elderly group, the number of stenosed coronary vessel of hyperuricemic group was significantly higher than that of normouricemic group (2.74±0.70 vs 2.34±0.82, p < 0.05), while in the young and middle-aged group, the number was not statistical different in the above two groups (1.93±0.69 vs 2.13±0.84, p > 0.05). Between the serum uric acid groups, they both showed no statistical significant differences in the elderly group and the young and middle-aged group (p < 0.05).

**CONCLUSIONS:** Referring to patients diagnosed with STEMI, the severity of coronary artery disease in the elderly group is more severe than that in the young and middle-aged group. As to the elderly patients with STEMI, positive correlation is found between serum uric acid level and severity of coronary artery disease.

**P175**

**Arrhythmias and Coronary Angiography Characteristics of Acute Myocardial Infarction in Elderly Patients**

G. X. Xiao, G. N. Liu, *Department of Cardiology in the First Hospital of China Medical University 110001, China*

**BACKGROUND:** The study aimed to compare the arrhythmias and coronary angiography
characteristic differences in elderly patients (75 years or older) and younger patients (below 75 years).

**METHODS:** The study included 544 patients with acute myocardial infarction (AMI) treated in 2005-2010. Analyses were performed retrospectively. The patients were separated into 2 groups according to age. The group I consisted of 244 patients aged 75 or over (mean 79 years) and the group II consisted of 300 patients aged below 75 years (mean 62 years).

**RESULTS:** Compared with younger subjects with a higher incidence of arrhythmia, sinus bradycardia, atrial fibrillation and (or) atrial flutter were significantly higher in elderly people (p<0.05). Premature ventricular contractions (PVCs) were also more common (p<0.05). Complexity of ventricular premature beats (low-III-IV grade) was more frequently diagnosed in the elderly (p<0.05). Fatal ventricular flutter or fibrillation were also more common (p<0.05). In elderly patients there were more patients with previously diagnosed myocardial infarction or cerebral infarction (p<0.05) and with hypertension (p<0.05). Dyslipidemia was less frequently diagnosed in the elderly. Myocardial infarction (STEMI) was also more common (p<0.05). Non-ST-segment elevation myocardial infarction (NSTEMI) was more frequently diagnosed in the elderly (p<0.05). Invasive procedures like coronary angiography and PCI were significantly less performed in elderly group when compared to younger subjects (p<0.05). Multivessel disease and multiple sites of vascular stenosis were both more common among elderly patients. Gensini score was significantly higher (97.5 ± 38.5) vs (54.5 ± 31.5) (p<0.05).

**CONCLUSIONS:** Our observations confirm the differences in the arrhythmias and degree of vascular stenosis of AMI in the elderly as described previously. All patients of advanced age should be considered as having the highest risk of death. They are more prone to arrhythmias and have more severe coronary stenosis.

**P176**

*Systolic Blood Pressure and Renal Progression in Elderly with Moderate to Severe Chronic Kidney Disease under Nephrologist Care: a Cohort Study from a Tertiary Hospital*

H. Zhao, Y. Wang, L. Q. Meng, L. X. Zhang, F. Wang, X. M. Li, *Department of Nephrology, the First Hospital of Beijing University, Beijing, 100034, China*

**OBJECTIVE:** To identify the effect of blood pressure control on renal progression in the elderly CKD patients with eGFR stage G3-G4.

**METHODS:** Patients aged 65 years or older in our CKD clinic with baseline CKD stage G3-G4, who had been followed up for more than one year from October 2006 to February 2014, were included in this study. Those who had an annual loss of eGFR for more than 5ml/min/1.73m2/y, or reached G5, and/or initiated renal replacement therapy were regarded as progression of CKD. The risk factors for progression were analyzed by Cox regression.

**RESULTS:** A total of 118 patients (57 men, mean age 73.8 years) were enrolled in the longitude study. The baseline blood pressure was 137.0±18.0/72.5±10.3mmHg. During the average 26 months follow-up period, the average blood pressure was 136.2±12.1/70.5±6.9mmHg while the control rate was 64.4% and 84.7% respectively based on the target blood pressure of 140/90mmHg and 150/90mmHg. 28 patients (23.7%) had progression of their renal disease. Average systolic blood pressure and baseline eGFR were independent risk factors for progression of CKD by multivariate analysis.
CONCLUSIONS: Blood pressure control should be emphasized in elderly CKD patients with advanced renal stage.

P177
Effect of Short-term Exogenous Insulin on Autocrine Regulation of β-cell

X. Rong, J. Zhang, J. Liu, Department of Endocrinology, the First Affiliated Hospital of Guangxi Medical University, Nanning, 530021, China

OBJECTIVE: to investigate the effect of short-term exogenous insulin treatment on autocrine regulation of pancreatic β cells

METHODS: to investigate the effect of endogenous insulin only, HIT-T15 cells was treated with 1.4mmol glucose (low glucose control, LG group); potassium chloride (KCl group) or Gliclazide (GLi group) that stimulated insulin secretion. Groups were continuously refreshed with medium containing high glucose (iHG group), KCl (iKCl group), and GLi (iGLi group) to cancel out the effect of endogenous insulin. And to investigate the effect of exogenous insulin only, a LG control group is also set, plus a LG+CCB control group treated with 1.4mmol/L glucose and 10μmol/L nifedipine, a LG+CCB+LINS group treated with 1.4mmol/L glucose, 10μmol/L nifedipine, and 500μmol/L glucose, and a LG+CCB+HINS group treated with 1.4mmol/L glucose, 10μmol/L nifedipine, and 5mmol/L glucose. The cells were harvested after 0min, 30min, 60min, 90min and 120 of treatment, and insulin secretion of each group was determined by chemiluminescence assay, and proinsulin (PI) mRNA expression was determined by real-time quantitative PCR, and IRS-1 tyrosine phosphorylation was determined by immunohistochemistry.

RESULTS: The effect of endogenous insulin included that PI mRNA expression of the KCl and GLi group gradually increased, and peaked at 90min (P<0.05). PI mRNA level was higher in the KCl and GLi groups than the LG, iKCl and iGLi groups at all tested time points (P<0.05). After stimulation with KCl and iGLi for 60min, IRS-1 tyrosine phosphorylation level began to increase, at a level higher than that of the LG, iKCl and iGLi groups (P<0.05). Insulin secretion of the KCl and GLi groups was continuously increasing during the whole 120-min experimental period. Insulin secretion of the iHG, KCl and GLi groups were significantly higher than that of the LG, and iKCl and iGLi groups (P<0.05). The effect of exogenous insulin was that when secretion of endogenous insulin was inhibited, exogenous insulin stimulation increased PI mRNA expression of pancreatic β cells in a dose-dependent manner (LG+CCB+HINS > LG+CCB+LINS > LG, LG+CCB, P<0.05). Stimulation with exogenous insulin also increased IRS-1 tyrosine phosphorylation in a dose dependent manner (LG+CCB+HINS > LG+CCB+LINS > LG, LG+CCB, P<0.05).

CONCLUSION: Short-term exogenous insulin may act on the pancreatic β cells, and increase proinsulin synthesis and insulin secretion in an autocrine manner. And it is suspected that such positive feedback may be beneficial to fast procession of the blood glucose surge after diet and replenishment of insulin consumption.

P178
Prevention of Liver Cancer in Hepatitis C Carriers with Food Supplements

C. P Chen, MD., Huagan Genomics Co., Ltd.
**BACKGROUND:** Liver cancer is the most common cancer in the world. Hepatitis B or C is the major cause of liver cancer. The total population of hepatitis C is about 170 million in China. About 20 to 30 years later, 20-30% of hepatitis C carriers will develop to cirrhosis and liver cancer. High virus load is the key to predict liver cancer. Reducing the virus load is an important issue in the management of the hepatitis C carriers. Current therapy for hepatitis C is interferon with Ribavirin with about 30-50% cure rate. However, the side effects are severe such as general weakness, nausea, vomiting, low WBC and platelet and loss of hair. Therefore, searching for an alternative therapy becomes necessary. This study was to introduce a therapeutic method by combination of immune regulatory factors with herbs (Liver Strong).

**METHODS:** Twenty-one hepatitis C carriers were included. They took these supplements two capsules, two times a day. General conditions, blood liver function and virus counts were performed at day 0 and day 90. The results were evaluated with pair-Student's T test for statistic significance.

**RESULTS:** In 21 hepatitis C carriers, 15 of them (71%) were improved in general conditions in the respect of blood liver function and virus counts. For those improved cases, about 90% reducing rate of virus counts in hepatitis C carriers in day 90 were observed. The study showed increased natural killer cells killing activity and interferon-γ.

**Discussion:** With the success in animal study, the supplement for hepatitis C carriers has been proved to have the efficacy of reducing virus counts with no side effects, and it needs further experiment in clinics.

---

**P179**

**Study of Related Factors and Prevalence for Essential Tremor of Uygur Residents in Xinjiang Uygur Autonomous Region**

Y. Y. Yao¹, R. R. Gao¹, X. L. Yang², Y. L. Wang¹, ¹The First Affiliated Hospital of Xinjiang Medical University, Urumqi, 830054, China; ²The Third Affiliated Hospital of Xinjiang Medical University, Urumqi, 830054, China

**OBJECTIVE:** To study the prevalence and related factors of essential tremor (ET) in the Hetian in Xinjiang area of permanent residents.

**METHODS:** By the cluster random sampling method, the older residents (≥ 10 years) at the age of 45 and older in Xinjiang's Hetian region jurisdiction were received epidemiological survey from 1 city and 7 counties of hetian region. Hetian City, Yutian County, Moyu county and Luopu county were randomly selected. According to the standard of ET diagnosis, patients were screened by face-to-face way to understand the factors related to the pathogenesis of ET. Meanwhile, healthy people without ET were selected as control group according to 1:1 ratio, which needed to match the condition in gender, nationality, and age (±2). The data were analyzed with EpiData two software 3.1 using statistical software SPSS for the prevalence of ET. Multivariate conditional Logistic regression was used.

**RESULTS:** Total of 5932 patients received the questionnaire investigation, and 216 were found to be ET patents of Uighur nationality. The prevalence of ET over 45 years of age in the area was 3.64%, and 3.76% of them were male, 3.52% were female. The prevalence rates of 45-55 years, 55-65 years, 65-75 years, and over 75-years of age were 30.82%, 37.19 %, 40.77 %, 43.14 % respectively. Multivariate conditional Logistic regression analysis showed that the pesticide exposure history (B=2.664, χ²=86.773, P<0.05, OR=14.347, 95% CI 8.192-25.127), family history (B=3.191, χ²=61.430, P
OR=24.303, 95% CI 10.943-53.972) was associated with increased risk of ET. Occupation, education, sports and social activities, drinking tea, eating habits had no obvious correlation with prevalence of ET.

CONCLUSION: The prevalence for patients with ET over 45 years old is 3.76%, and is increasing with age. The incidence of ET is increasing, and is closely related to age, pesticide exposure history and family history. The study provides a theoretical basis for early prevention and treatment of ET in the area.

P180
Association of Methylenetetrahydrofolate Reductase Gene Polymorphism with Mild Cognitive Impairment in Xinjiang

L. Zhang, X. H. Zhou*, Senior Cadre Ward, the First Affiliated Hospital of Xinjiang Medical University

OBJECTIVE: To investigate the relationship between the methylenetetrahydrofolate reductase gene (MTHFR) A1298C (rs1801131) and C677T (rs1801133) polymorphisms and mild cognitive impairment (MCI) in Xinjiang Uygurs population.

METHODS: The stratified, random and multistage cluster sampling was used in MCI epidemiological survey of the residents aged 55 years or over in Xinjiang area, and 129 residents with MCI (male 74 cases, female 55 cases) and 131 cases matched with age, gender, place of residence, educational situation and illness condition were selected (male 75 cases, female 56 cases). The A1298C and C677T polymorphisms of the MTHFR gene were determined by the PCR and SNaP shot SNP methods. The case-control analysis was adopted to analyze the frequencies of genotypes and alleles.

RESULTS: (1) The distribution of genotypes or alleles of MTHFR gene A1298C had significant differences between the MCI group and the control group in the Xinjiang Uygurs population (P<0.05). There was a significant increase of MCI in the C allele carriers (OR=1.525, 95%CI:1.038-2.241, P<0.05). (2) The distribution of genotypes or alleles of MTHFR gene had significant differences between the female MCI group and the female control group (P<0.05). There was a significant increase of MCI in the C allele female carriers (OR=2.238, 95%CI:1.196-4.187, P<0.05). (3) The distribution of genotypes or alleles of MTHFR gene C677T had no differences between the MCI group and the control group (P>0.05). (4) The distribution of genotypes or alleles of MTHFR gene C677T had no differences between different gender compare groups in the Xinjiang Uygurs population (P>0.05).

CONCLUSIONS: The MTHFR gene A1298C polymorphisms might be associated with MCI in Xinjiang Uyugur population. The C677T polymorphisms might not be associated with MCI in Xinjiang Uyugur population.

P181
The G-395A Polymorphism in the Promoter Region of the KLOTHO Gene Associated with Cognitive Impairment among Chinese Nonagenarians and Centenarians

M Yang, L Luo, BR DOng, The Center of Gerontology and Geriatrics, West China Hospital, Sichuan
University

**OBJECTIVE:** To examine the possible association between the G-395A polymorphism in the promoter region of the KLOTHO gene and cognitive impairment among Chinese nonagenarians and centenarians.

**METHODS:** Data were from the Project of Longevity and Aging in Dujiangyan (PLAD) study. The genotyping of G-395A (rs1207568) in the promoter region of the KLOTHO gene was performed using the TaqMan allelic discrimination assay. Cognitive function was assessed with the Mini-Mental Status Examination (MMSE). Age, gender, educational level, cigarette smoking, alcohol drinking, hypertension, diabetes and other potential confounders were also evaluated.

**RESULTS:** A total of 605 participants (mean age: 93.5 ± 3.2 years) were included. The genotype frequencies of the KLOTHO G-395A polymorphism were 0% AA, 32.1% GA, and 67.9% GG in the whole sample. The frequency of the GA genotype was 29.4% and 37.5% in the cognitive impairment group and the control group, respectively. The allele frequencies were 0.853 for the G allele and 0.147 for the A allele in cognitive impairment group; whereas the corresponding frequencies were 0.812 and 0.188, respectively, in the control group. The prevalence of cognitive impairment was significantly lower in the GA genotype group than that in the GG genotype group (61.3% vs. 69.6%, p=0.044). Compared to subjects with GG genotype, subjects with GA genotype had significantly lower risk of cognitive impairment (odds ratio [OR] 0.69, 95% confidence interval [CI] 0.49 to 0.99) after adjusting for age, gender and other relevant risk factors.

**CONCLUSION:** The KLOTHO G-395A polymorphism is associated with cognitive impairment in Chinese nonagenarians and centenarians.

**P182**

**Pulse Pressure and Relevant Factors in Elderly Hypertensive Patients, a Single-center Study**

J. L. Ye, X. W. Yu, Y. Wang, L. Yang, X. P. Tuo, *Changhai Hospital, Second Military Medical College, Shanghai, China*

**OBJECTIVE:** To examine the profile of pulse pressure and correlative factors in elderly hypertensive patients.

**METHODS:** Household surveys in elderly hypertensive patients were made to measure their blood pressure, heart rate, height, weight and to investigate their general conditions, living habits and other relevant information. The SPSS 19.0 software was used to process and analyze data.

**RESULTS:** 102 elderly hypertensive patients were enrolled in this study, with the age ranging from 78 to 92 years old (84.65±3.14 years old), and PP 40-92mmHg (62.86±10.01 mmHg). Univariate analysis showed that age, body mass index (BMI), abdominal obesity, hypertension duration, hypertension risk stratification, and the time of taking antihypertensive drugs (p<0.05) were associated with PP. Multiple stepwise regression analysis showed hypertension risk stratification, hypertension duration, age, BMI were related to PP (p<0.001).

**CONCLUSIONS:** Hypertension risk stratification, hypertension duration, age, and BMI were the independent risk factors on pulse pressure and the elderly hypertensive patients.
P183
Characteristic of Abdominal Fat Distribution and its Relationship with Metabolic Syndrome in the Elderly

C. H. Wang, General of Hospital of People’s Liberation Army, Beijing, 100853, China

OBJECTIVE: To investigate the characteristic of abdominal fat distribution by computed tomography and the relationship with metabolic syndrome in the elderly

METHODS: Patients aged ≥65 years old were collected from those who underwent an abdominal CT scanning in the Department of Radiology of Chinese PLA General Hospital from January 2010 to December 2011 through retrospective analysis. Healthy normal weighted subjects and gender-specific BMI-matching middle-aged adults were selected to compare the difference in the same period. Visceral fat area (VFA) and subcutaneous fat area (SFA) were measured in the abdomen at the cross-sectional image of L4 and L5 intervertebral space.

RESULTS: 390 subjects were enrolled in this study (252 men and 138 women). Old men had more VFA (139.09±80.19cm$^2$ vs 118.49±47.21cm$^2$, P<0.05) and less SFA (163.74±71.47cm$^2$ vs 204.31±87.15cm$^2$, P<0.05) than old women. VFA and SFA were not significantly different in both men and women in the 3 different age groups (>65–75 years, >75–85 years, >85 years; P>0.05). Compared with healthy normal weighted old adults and BMI-matched middle-aged adults, VFA and SFA increased with more components of MS except in only one component group. Logistic regression analysis showed VFA was a risk factor for older adults with MS (male: OR=1.57, 95%CI: 1.156–2.128, P=0.004; female: OR=2.19, 95%CI: 1.473–3.269, P=0.000). Besides, SFA was also a risk factor in men (OR=1.57, 95%CI: 1.156–2.128, P=0.004; female: OR=1.81, 95%CI: 1.336–2.456, P=0.000), but not in women.

CONCLUSION: There is sex difference of abdominal fat distribution in the elderly, but not age difference. Visceral fat is a risk factor for older adults with MS in both men and women, and the subcutaneous fat should also be paid attention to in old men.

P1845
Temperature Change of Mingmen (GV4) before and after the Treatment of the 10.6μm Laser Moxibustion for Cancer-related Fatigue ---- A Randomized Double-blind Controlled Trial

X. N. Shen, Y. Qu, L. Qiu, Xuhui Central Hospital, Shanghai Clinical Center, Chinese Academy of Sciences, Shanghai 200031, China

OBJECTIVE: To explore a new safe and stable therapy for cancer-related fatigue through observing the temperature change of Mingmen (GV4) before and after the treatment of the 10.6μm laser moxibustion

METHODS: Thirty patients were randomly divided into two groups. We put the probe of the laser acupuncture therapeutic apparatus on CV4, CV6 and double ST36. Each acupoint would be irradiated for 20 minutes each time. The treatment lasted for 4 weeks with 3 times each week 12 times treatments.
The temperature change of Mingmen (GV4) were measured both at the beginning of the treatment and at the end of last treatment. Another 10 healthy subjects with the age ranging from 55 to 80 were enrolled in order to measure their temperature of Mingmen (GV4) as control group.

RESULTS: The real laser irradiation group had better effect than the shame laser irradiation group after two and four weeks' treatment (treatment after two weeks: 3.79±1.26, 4.61±0.69, P=0.035; treatment after two four weeks: 2.82±1.47, 4.26±0.66 P=0.002). Compared with shame laser irradiation group, the real laser irradiation group had a less fatigue index after two and four weeks' treatment (3.79±1.26, 4.64±0.99, P=0.021; treatment after two four weeks: 2.82±1.47, 4.64±0.99, P=0.001). Also, the four weeks' treatment effect (73.33%) was much better than that of two weeks' treatment (26.67%). Ten CRF patients had lower temperature (33.03±2.06) on Mingmen (GV4) than that of healthy participants (35.13±0.60, P=0.011).

CONCLUSION: The 10.6μm laser acupuncture therapeutic apparatus has significant effect on the reduction of fatigue to patients with tumor.

P185
Correlation Analysis of Characteristics of Coronary Artery Lesions and Left Ventricular Ejection Fraction in Acute Myocardial Infarction with Diabetes Patients

G. N. Liu, the First Affiliated Hospital of China Medical University

OBJECTIVE: The present study was to analyze the characteristics of coronary artery lesions and left ventricular ejection fraction (LVEF) in young and middle-aged and elderly patients with different types of acute myocardial infarction complicated with diabetes, and to explore the relationship between the severity of coronary artery disease and LVEF.

METHODS: In total, 1,017 patients were classified into two types: ST-segment elevation myocardial infarction (STEMI) and Non ST-segment elevation myocardial infarction (NSTEMI). In the two types of myocardial infarction, patients were divided into two groups: the young and middle-aged group and the elderly group according to age ≥ 60 years and < 60 years. Gensini score was used to evaluate the degree of stenosis of coronary artery. All data were processed using SPSS 17.0 software.

RESULTS: In STEMI group, compared with young and middle-aged patients, elderly patients had a higher proportion of diabetes (24.7% vs 17.8%, P=0.02), and multivessel disease (83.7% vs 70.8%, P=0.01), elderly patients’ Gensini score was higher (73.18±37.67 vs 57.77±32.69, P=0.01), LVEF (%) was lower (51.65±9.12 vs 54.78±7.87, P=0.01). In NSTEMI group, compared with young and middle-aged patients, elderly patients had a higher proportion of diabetes (33.6% vs 17.0%, P=0.01). In young and middle-aged STEMI group, patients with diabetes, compared with LVEF > 50%, had a higher proportion of LVEF ≤ 50% (70.0% vs 42.9%, P=0.02) when the degree of coronary artery stenosis was 100%, and patients had a higher proportion of LVEF ≤ 50% (45.0% vs 16.4%, P=0.01) when the coronary artery disease was the single vessel. Patients with non diabetes, compared with LVEF > 50%, had a higher proportion of LVEF ≤ 50% (73.3% vs 58.5%, P=0.01) when the degree of coronary artery stenosis was 100%, Patients had a higher proportion of LVEF ≤ 50% (38.8% vs 27.5%, P<0.05) when the coronary artery disease was the single vessel, and had a higher proportion of LVEF ≤ 50% when the infarct related artery was LAD (74.4% vs 43.8%, P=0.01) and LM (1.2% vs 0, P=0.01). In elderly STEMI group, patients with non diabetes, compared with LVEF > 50%, had a higher proportion of LVEF ≤ 50% when the infarct related artery was LAD (69.8% vs 35.9%, P=0.01) and LM (0.9% vs 0.6%, P=0.01). In elderly NSTEMI group, patients with diabetes, compared with LVEF >
had a higher proportion of LVEF ≤ 50% (70.0% vs 31.3%, P=0.03) when the degree of coronary artery stenosis was 100%. In young and middle-aged STEMI group, there was a negative correlation between LVEF and the degree of coronary artery stenosis in patients with diabetes (r_s=-0.27, P=0.02). There was a negative correlation between LVEF and the degree of coronary artery stenosis (r_s=-0.14, P=0.01). In STEMI with elderly group, there was a negative correlation between LVEF and Gensini score (r_s=-0.22, P=0.01).

CONCLUSION: In young and middle-aged STEMI group, whether with diabetes, LVEF is lower when the infarction related artery stenosis is severe. In young and middle-aged and elderly STEMI group, patients with non diabetes, LVEF is lower when Gensini score is high, and when the infarct related artery is LAD and LM. In NSTEMI group, Gensini score and LVEF show no significant difference.

P186
An Analysis of 86 Drug-induced Liver Injury Cases in the Elderly

Q. Q. Wang, Z. J. Bao*, Huadong Hospital of Shanghai Fudan University

BACKGROUND: Drug-induced liver injury shows a growing incidence and has become a major cause of chronic liver disease. This study aimed to analyze the clinical characteristics of drug-induced liver injury (DILI) in the elderly patients, and to investigate the relevant factors.

METHODS: A retrospective analysis of 86 DILI patients was made and data including the patients’ gender, occupation, medication that caused liver damage, concomitant medication, clinical features, laboratory tests, concomitant diseases, allergies and prognosis was collected.

RESULTS: The drugs that caused DILI included Chinese herbal medicine mainly (31.4%), followed by antibiotics (10.5%), hormones (10.5%), lipid-lowering statin drugs (9.3%) DILI was mainly induced by the underlying diseases such as hypertension (36.6%), type 2 diabetes (16.1%), cholecystitis, cholelithiasis, hyperlipidemia, coronary heart disease, arrhythmia, cerebral infarction and chronic renal insufficiency. Clinical manifestations included: anorexia (21.5%), fatigue (14%), dark urine (19.4%), jaundice (15%), abdominal discomfort and abdominal pain (12.9%), diarrhea (1.1%), weight loss (1.1%), plus 15.1% of the patients without showing discomfort. Laboratory test results showed the following frequency: ALT 98.8%, AST 92.8%, ALP 55.1%, GGT 83.5%, TBIL 51.3%, IBIL 64.5%, DBIL 39.5%. DILI patients received conservative treatment. The results showed that 37 patients got healed, 46 patients became better and 2 died. The differences of ALT, AST, ALP and GGT from 4 types of DILI were statistically significant, compared with cholestasis and mixed typed liver damage.

CONCLUSION: A wide variety of drugs that caused liver damage and the largest proportion of drugs that cause liver damage is Chinese herbal medicine, followed by antibiotics and hormones. The most frequently used concomitant drugs include cardiovascular medication, antibiotics and health commodities.

P187
A study to Detect Age-related Changes in Liver Function Reserve of Healthy People by L-[1-13C]-phenylalanine Breath Test

J. Du, S. B. Zheng, Department of Geriatrics, Huadong Hospital, Fudan University, Shanghai, 200040,
OBJECTIVES: To analyze the change in liver function reserve with age by using $^{13}$C-PheBT in healthy people.

METHODS: Thirty-seven healthy adults who met the selection criteria were chosen and categorized in groups according to age: young and middle-aged (group A, n=10), old (group B, n=9), very old (group C, n=9), and oldest-old (group D, n=9). All subjects were orally given 100ml of aqueous solution containing 100mg of L-$^{13}$C-phenylalanine. Before and after taking the reagent expired breath samples were collected at 12 time intervals. Changes in $^{13}$CO$_2$ abundance at different time intervals in the gas samples were recorded by isotope ratio mass spectrometer. The percentage of $^{13}$CO$_2$ excretion rate ($^{13}$CO$_2$ERt) and percentage of $^{13}$CO$_2$ cumulative excretion ($^{13}$Ccumt) at different times were calculated. Principal breath test parameters were compared with commonly used liver function indicators, and a correlation test was conducted. Three power curves were drawn i.e. DOB curve, metabolic rate curve, cumulative excretion rate curve, to reflect the change in liver function reserve with aging.

RESULTS: DOB, $^{13}$CO$_2$ERt, $^{13}$Ccumt were reduced in all four groups; in groups A and B DOB curve, metabolic rate curve cumulative excretion rate curve almost coincided, while in the remaining group they had a decreasing trend. Group D, A and B had the most significant difference (e.g. CO$_2$ERmax is 19.8±8.7, 17.0±5.9 and 12.7±4.8 in group A, group B and group D, P<0.01, respectively). There was no significant difference between group A and B, likewise between C and D. There was correlation between $^{13}$C-PheBT main parameters such as $^{13}$CO$_2$ERmax, $^{13}$CO$_2$ER30, $^{13}$Ccum45, $^{13}$Ccum60 and commonly used liver function test indicators: positive correlation with ALB (e.g. $^{13}$CO$_2$ERmax, r=0.50, P<0.01) and negative with bilirubin (TBIL) (e.g. $^{13}$CO$_2$ERmax, r=-0.37, P<0.05).

CONCLUSIONS: $^{13}$C-PheBT is a safe, sensitive, reliable and accurate quantitative liver function test. It is recommended that the total duration of $^{13}$C-PheBT at one hour and the use of $^{13}$CO$_2$ERmax, $^{13}$CO$_2$ER30, $^{13}$Ccum45, $^{13}$Ccum60 as its main parameters. Liver function reserve of healthy individuals gradually declines with age in a slow process. It decreased significantly after about 70 years and more significantly after around 80 years old.

P188

MicroRNA-181b Stimulates Inflammation via NF-κB Signaling Pathway in Vitro

Y. Z. Wang, G. X. Mao, Y. D. Lv, Q. D. Huang, G. F. Wang. Zhejiang Provincial Key Laboratory of Geriatrics & Geriatrics Institute of Zhejiang Province. Zhejiang Hospital, Hangzhou 310013, China

OBJECTIVE: Acute lung injury (ALI) is characterized by an increase of inflammatory reaction and severe lung edema. A growing amount of evidence indicates that microRNAs (miRNAs) are involved in various human diseases. However, the expression profile and function of miRNAs in ALI have been rarely reported.

METHODS: miRNA microarray and RT-PCR were used to screen the miRNAs gene after lipopolysaccharide (LPS) stimulation in human bronchial epithelial (BEAS-2B) cells. An overexpression of miR-181b assay was performed in BEAS-2B cells, and then the expression of inflammatory factors IL-6 and p65 protein were analyzed. First BEAS-2B cells were treated by ammonium pyrrolidinedithiocarbamate (PDTC), the specific inhibitor of NF-κB, and then the changes
of p65 expression were tested by westernblot.

**RESULTS:** It was found that using miRNA microarray and RT-PCR, miR-181b was the most significantly up-regulated miRNA after LPS stimulation in BEAS-2B cells. Overexpression of miR-181b could induce an increment of interleukin (IL)-6 levels. Finally, it was identified that p65, a primary component of NF-κB was up regulated in miR-181b overexpression BEAS-2B cells, while PDTC can abrogate the up-regulation of p65 expression.

**CONCLUSION:** Our findings suggest that miR-181b may be involved in the process of LPS-induced inflammation in BEAS-2B cells by activating NF-κB signaling pathway, which implies that it could be served as a potential therapeutic target for ALI.

**P189**

Pre-and post-operative Risk and Post-operative Evaluation for Hip Fracture in the Elderly

W.L. Lu, Dewan Sheilesh Kumar, W.L. Lin, H.M. Shen, Q. Cheng, S.B. Zheng, Affiliated Huadong Hospital, Fudan University, Shanghai, 200040, China

**OBJECTIVE:** To investigate the retrieved data on elderly patients who underwent surgery for hip fracture, to explore measures to further reduce the risks, and to improve surgical efficacy.

**METHODS:** Total of 234 hip fracture patients (age ≥ 60 years) who underwent surgery were carried out. The characteristics and postoperative mortality of the patients were analyzed, and a comparison of Activities of Daily Living function, pre- and post-operative cognitive function were made.

**RESULTS:** Elderly accounted for 92.36% of hip fracture admissions. The female to male ratio was 2.5:1. The preoperative health status was mostly “normal” or “mild cognitive impairment”, hypertension, cardiovascular disease, diabetes mellitus, neurological disease, COPD, and chest infection were the most commonly seen co morbidities. Thirty days and one year postoperative mortality rate was 2.99% and 13.68% respectively, There were 64.32% of elderly who had complete recovery of their preoperative ability to maintain ADL function, 25.55% had partial recovery and 10.13% had no recovery. By univariate analysis, the type of fracture, preoperative BMI, type of surgery, postoperative complications and preoperative general physical health status were closely related to efficacy of surgical treatment (P < 0.05).

**CONCLUSION:** The elderly with hip fracture should receive surgical treatment timely. Adequate preoperative preparation through a multidisciplinary assessment, choosing the right type of surgery and anesthesia, enhancing the preoperative management, and reducing complications are the factors which are necessary to improve the prognosis of surgery.

**P190**

Analysis of a Model of Long-term Care for the Chinese Elderly---- The Experiences of Singapore, Europe and USA

Y.F. Wang1, A.P. Yu2, 1 the University of Sheffield, U.K.; 2 the First Affiliated Hospital of Zhengzhou University
It aimed to provide evidence and to formulate recommendations for government policy. Documentary analysis was used and the data was selected from Google Scholar. Experts’ views, thoughts and suggestions were collected. By analyzing each document after collecting the data, the existing problems, models of long-term aged care and relevant policy on the basis on the each topic were discussed. Social care service takes more weight than health care service within long-term care service. Delivering person-centered care is the focus of the services provided. Indeed, quality of life of elderly people is based on their own feelings, the sense of self-worth, so that meeting the needs of individuals becomes the priority of services providers. Long-term care service is provided by professionals, non-professional and direct care aiders. It includes social care that meets the need of daily living support, and health care to maintain the health of the elderly. Quality of life for older people is the main objective to measure the long-term care service provided. Protection of chronic disease and slow down pace of disability can benefit the cost saving on the long run. The findings highlight the importance of the following key aspects in achieving success in aged care: providing person-centered care, paying more attention to social care service rather than to health care service; regulating and supporting private institution care home, assisting the elderly to make right choices, facilitating care providers to help them take a practical philosophical approach to meet elderly’ needs; government should pay more attention to the protection of chronic disease and slow down the pace of disability, and call for all people involved to share the responsibility of providing long-term care.

P191
Prevalence Survey of Mild Cognitive Impairment among Uygur and Han Ethnic Elderly People

T. Zou, K. Keyimu, H.J. Miao, Parida Abuliz, X. H. Zhou, Department of Geriatrics, the First Affiliated Hospital of Xinjiang Medical University, 830011, Urumqi, Xinjiang, China

OBJECTIVE: To investigate conditions and distribution of Uygur and Han ethnic elderly people with mild cognitive impairment (MCI) in Xinjiang, and to provide the research foundation of in-depth study of MCI.

METHODS: According to the diagnosis of MCI of Mental disorder American Psychiatric Association's Diagnostic and Statistical Manual, 4th Edition (DSM - IV), we made a survey on 5398 old people (3931 Uygur and 1467 Han) with the age of 60 or older in the south, east area of Xinjiang and Urumqi.

RESULTS: (1) According to the age composition of national census in 2000, Xinjiang elderly people’s total crude prevalence rate of MCI was 8.95%, and their standardized prevalence rate of MCI was 9.83%. While Uygur and Han ethnic elderly people’s total crude prevalence rates of MCI were 8.24% and 10.84% respectively, and standardized prevalence rates were 8.79% and 10.86%. The difference was statistically significant ($\chi^2 = 8.839, P <0.05$). (2) In this survey, male and female’s crude prevalence rates of MCI were 8.46% and 9.42% respectively, and their standardized prevalence rates were 8.59% and 9.92% respectively. Female’s prevalence rate was slightly higher than that of males, but the difference was not statistically significant ($P > 0.05$). (3) The prevalence rates of 60-69 year old group, 70-79 year old group and 80 years or older group of Uygur people were 7.58%, 11.65% and 6.63% respectively. Correspondingly, the prevalence rates of the three groups of Han people were 8.64%, 12.50%, 19.30%. The difference was not statistically significant ($P > 0.05$) in 60-69 year old group and 70-79 year old group, but Han people’s prevalence rate was higher than Uygurs’ in 80 or older group ($P <0.05$). Whatever Uygur or Han was, the prevalence of MCI was increasing with age, and the highest prevalence was in the 80 year old group ($P <0.05$).
CONCLUSION: The prevalence rate of MCI is different between Uygur and Han ethnic elderly people, and the prevalence of MCI is increasing with age.