

cardiovascular risk factors were assessed in all patients. The multi-variable logistic regression analysis was used.

RESULTS The overall prevalence of LAE was 15.45% for subjects aged over 35, 19.68% in the hypertensive patients. LAE was associated with age (OR: 1.052, 95%CI: 1.045 to 1.059), female (OR: 3.633, 95%CI: 4.247), SBP (for Grade 1 hypertension OR: 1.394, 95%CI: 1.200 to 1.618, for Grade 2 hypertension OR: 1.955, 95%CI: 1.615 to 2.366, for Grade 3 hypertension OR: 2.744, 95%CI: 2.146 to 3.509), anemia (OR: 1.655, 95%CI: 1.420 to 1.929), LVMI (OR: 1.003, 95%CI: 1.002 to 1.004), mitral stenosis (OR: 20.892, 95%CI: 2.594 to 168.258) and mitral incompetence (OR: 3.476, 95%CI: 2.550 to 4.738), LVEF (OR: 0.971, 95%CI: 0.957 to 0.986).

CONCLUSIONS Age, gender, SBP, anemia, LVMI, etc are risk factors for LAE. It is urgent for us to detect and intervene LAE early, in order to reduce the reverse events.

GW26-e0006

Associations of plasma homocysteine and high normal blood pressure with arterial stiffness in Chinese healthy population: result from the China stroke primary prevention study (CSPT)

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OBJECTIVES Pulse wave velocity (PWV) as direct indication of arterial stiffness is a critical predictor of cardiovascular events, there is a lack of research on the correlation between plasma homocysteine (Hcy) and arterial stiffness in large community-based sample of the Chinese population.

METHODS Plasma homocysteine and other cardiovascular disease risk factor variables were measured in 2148 community healthy people enrolled in the CSPT Study. Large-artery stiffness was assessed in terms of brachial-ankle PWV (baPWV).

RESULTS The mean age of the population was (62.5 ± 7.5) years, more females (63.8%) and their average Hcy level was (14.17 ± 4.70) mmol/L while average level of baPWV was (1586 ± 379) cm/s. BaPWV was positively correlated with Hcy in entire group after adjustment for age, gender and other CAD risk factors ($\beta_{Hcy}=5.32$, $p<0.001$). There was a significant interaction effect of the blood pressure (BP) on arterial stiffness, the impact of Hcy on baPWV of subjects with the high normal BP was more significant than that of individuals with the optimal normal pressure (β_{Hcy} : 2.55 vs. 9.88, $p=0.004$). We chose optimal BP group as a reference, in whole population PWV showed a significantly positive correlation with different level of BP: Normal BP ($\beta_{BP}=101$, $p<0.001$), high normal BP ($\beta_{BP}=193$, $p<0.001$), Grade 1 hypertension ($\beta_{BP}=413$, $p<0.001$). Regression analysis of PWV between high normal BP and homocysteine revealed a significant interaction between BP level and Hcy on baPWV.

CONCLUSIONS Plasma Hcy was an independent correlate of arterial stiffness in the Chinese community population. High normal blood pressure may worsen the impact of Hcy on arterial stiffness, and is a major link between Hcy and aortic arterial stiffness.

GW26-e0084

Characteristics of Traditional Chinese Medicine Constitutions and the relationship with hypertension in adult Chinese resident: a cross-sectional study

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OBJECTIVES Traditional Chinese Medicine Constitution (TCMC) theory is widely applied in the practice of medical treatment for thousand years in China, which is identified as the treasure of Chinese civilization. TCMC determined the susceptibility to certain disease and therapy effect, which can be divided into normal constitution and unbalanced ones. This study aims at investigating the distribution and the characteristic of TCMCs in adult Chinese resident in Changsha and the effects on susceptibility and therapy effect of hypertension.

METHODS The study used cross-sectional survey, collected all available information which including age, gender, occupation, alcohol/smoke intake, family history, body mass index (BMI), blood pressure (BP), TCMC and blood test in part respondents from community healthy registry system in Yuelu district, Changsha city.

The association between independent factors and each TCMCs, as well as TCMCs and the prevalence and control rate were analyzed. Pre-diction prevalence model of hypertension were established by Logistic analysis with TCMC and other factors.

RESULTS A total of 237,485 individual records were collected, of which 188,136 (79.2%) were balanced TCMC. Statistical analysis indicated that age, BMI, occupation, smoking and alcohol intake, hemoglobin, fasting blood-glucose, cholesterol, triglyceride, creatinine, potassium and sodium in blood were different in balance and unbalance TCMCs groups. The prevalence of hypertension was significant difference between balance and unbalance TCMCs groups (9.3% vs 30.7%, $P<0.01$). Logistic analysis indicated age, sex, BMI, alcohol and smoke intake, family history and TCMCs were significant correlated the prevalence of hypertension. PW(OR4.16), ND(OR 3.34) and PD(OR 2.78) were more likely to suffering from hypertension, while QDP(OR0.65) may be a protective TCMC by hypertension after controlling confounding factors. 29,123 (88.2%) hypertensive patients were under administrated by community physician. Blood pressure was significant higher in unbalance TCMCs group compared with balance TCMCs group in both systolic and diastolic blood pressure (SBP/DBP) (133.91±14.79 vs 132.62±15.07mmHg, $P<0.01$; 80.51±9.03 vs 80.27±8.90mmHg, $P<0.05$). Wetness-heat had the worst SBP/DBP control level, while Yin-deficiency had the best SBP/DBP control level.

CONCLUSIONS Age, occupation, smoking and alcohol intake, BMI, blood glucose/lipid metabolism, hemoglobin, blood electrolytes may contribute the formation of TCMCs. TCMCs have an impact on incidence and therapy effect of hypertension, could be a potential subtyping for hypertension.

GW26-e0108

A Preliminary Research on the Relationship of Serum Chloride with Severity of Obstructive Sleep Apnea in Hypertensive Patients

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OBJECTIVES Our objective was to investigate the relationship between mutations of the KCNJ5 gene and clinical phenotype in patients with aldosterone-producing adenoma (APA).

METHODS 46 Patients with PA was recruited between 2008 to 2012 from the people' hospital of Xinjiang Uygur Autonomous Region. The surgical adrenal specimens and adjacent adrenal tissue were collected and stored in liquid nitrogen immediately after excision and maintained at -80C. Genomic DNA was prepared from adrenal tissues and peripheral blood, and all exons including the 5'- and 3'-untranslated regions (UTRs) (~1kb) of KCNJ5 gene were PCR amplified. PCR products were sequenced using an optimized direct sequencing analysis protocol. Serum ALD, Serum sodium, potassium, and creatinine levels were measured. The LV dimension was measured by Doppler echocardiogram.

RESULTS Three missense mutations were found in tissues of 46 patients with APA: C.451G>C/A(p.G151R)(5/46), c.503T>G(p.L168R)(4/46), C.830T>A(p.S209T)(12/46) S209T. There is no significant difference between the wild type group and the mutation group on gender, age, hypertension duration, systolic blood pressure, diastolic blood pressure, serum K+, tumor diameter, seated ALD, seated RAR, ARR, serum lipid, IVS, LVM, LVEDD, LVESD and LVMI ($p>0.05$). uric K+ and EF showed significant difference between the wild type and the mutation group. Comparison of the baseline date among G151R, L168R and S209T, The patients with G151R mutation had higher SBP and DBP than L168R and S209T ($p<0.05$) and had the lowest serum K+ and the highest uric K+ than other groups.

CONCLUSIONS The mutations of the KCNJ5 gene have related to clinical phenotype in patients with aldosterone-producing adenoma.

GW26-e0139

The relationship between the KCNJ5 gene polymorphisms and lipid metabolism in patients with primary aldosteronism

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OBJECTIVES Primary aldosteronism (PA) is strongly associated with the increasing prevalence of cardiovascular events and metabolic syndrome. Study on the genetic mechanism of dyslipidemia is of great