Methods: Studies were systematically searched and identified in the Pubmed and Embase databases. Published studies evaluating the efficacy of RDN in patients with RH, reporting at least one outcome of interest were included. Studies were divided into controlled and uncontrolled studies and analyzed using indicated meta-analysis models.

Results: We identified 21 eligible studies of 1225 participants. In controlled studies, there was a reduction in mean systolic and diastolic blood pressure (BP) and heart rate (HR) evaluated by ABPM at 6 months of -14 mm Hg (95% CI -23.93- -4.07), -8.0 mm Hg (95% CI -14.74- -1.26), and -3.77 beats per minute (bpm) (95% CI -7.05- -0.50), respectively, compared with medically therapy (for both, P<0.05). Similarly, in uncontrolled studies, reductions in mean systolic and diastolic BP and HR at 6 months were -12.83 mm Hg (95% CI -17.45- -8.21), -6.77 mm Hg (95% CI -9.24 - -4.30), and -3.62 bpm (95% CI -5.60- -1.63), respectively (for both, P=0.001). Moreover, there were marked improvements in the effect of RDN on cardiac structure, whereas no worsening of renal function was reported and there were few procedural adverse events.

Conclusions: RDN demonstrates significant reductions of BP and HR evaluated by ABPM in RH patients. Moreover, it also elicits a marked improvement in cardiac structure without renal impairment. RDN may be a novel and effective approach in treatment of RH with a favorable safety profile.

GW52-e3209
Blood Pressure Variability in Mongolian and Han Hypertension Patients
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Objectives: To investigate the feature and clinical significance of ambulatory blood pressure (ABP) and central aortic pressure (CAP) in Mongolian and Han patients with essential hypertension (EH).

Methods: Methods A total of 432 hypertension patients were divided into groups, Mongolian [n=213, including 127males, 131 females, aged (58.9 ± 8.2) years], Han [n=264, including 125 males, 139 females, aged (57.8 ± 8.5) years]. Fasting plasma glucose (FBG), body mass index (BMI), total cholesterol (TC), triglyceride (TG), low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), 24 h ABP including daytime diastolic blood pressure (dDBP), daytime systolic blood pressure (dSBP), night-time systolic blood pressure (nSBP), nighttime diastolic blood pressure (nDBP), 24 h SBP, 24 h DBP were compared between 2 groups; CAP checks included central diastolic pressure (CDP), central systolic pressure (CSP), central pulse pressure (CPP), augmentation index (AI).

Results: Results BMI, TG, DBP, BSBP coefficient of variability, CSP were higher in Mongolian group than in Han group in varying age groups (P<0.05). CSP, dSBP increased with the augment of age, and higher in Mongolian group than in Han group in varying age groups (P<0.05).

Conclusions: Conclusion CSP, dSBP are higher in Mongolian hypertension patients than in Han, increasing with the augment of age. So 24 h ABP and CAP tests play an important role in preventing hypertensive complications in Mongolian high-prevalence areas.

GW52-e4114
Relation between White Coat Effect and Stroke A Cross Sectional Study from Beijing
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Objectives: Blood pressure variability (BPV) has been identified as an important new risk factor for cardiovascular events. White coat effect (WCE), measured as the first systolic blood pressure (SBP) measurement minus the mean of the second and the third measurements, is a type of BPV within a single visit. We investigated the relationship between WCE and stroke risk in this study.

Methods: 2972 participants who had 3 measurements of BP within one single visit were included. Participants were divided into three groups according to their WCE prehypertension: Group 1, Group 2 (WCE≤ 0.2-4.24th percentiles of WCE) and Group 3 (WCE≥ 97.06th percentiles of WCE). A multiple logistic regression model was used to analyze the relationships between WCE and stroke adjusted for age and BMI groups, gender, smoking status, hypertension, diabetes mellitus, BMI thickening, brachial-ankle pulse wave velocity (baPWV) abnormality and carotid plaque.

Results: Traditional risk factors, such as age, gender, hypertension, diabetes, and obesity were related to stroke (P<0.05). CIMT thickening, carotid plaque, baPWV abnormality were also related to stroke (P<0.05). Compared to WCE≤0.2-4.24th percentiles of WCE, the OR for stroke in WCE≥97.06th percentiles of WCE was 2.78 (95% CI 1.22, 6.36, P=0.015). After adjusting for age and BMI groups, gender, SBP, diabetes, hypertension, hypercholesterolemia, smoking status, CIMT thickening, carotid plaque and baPWV abnormality, the correlation became stronger, OR increased to 2.94 (95% CI 1.16, 7.50, P=0.025).

Conclusions: WCE≥97.06th percentiles of WCE was associated with stroke independently, further studies are needed to be conducted to assess the cause and effect relationship.
control at the mean time. Patients' height, body weight, systolic blood pressure (SBP), diastolic blood pressure (DBP) and blood lipid levels were recorded. VOI-1=1.33*SBP+0.33*DBP+133.3H.Fasting blood glucose, blood lipid profile, liver and renal functions, routine blood test and fibrinogen were also determined. Flow mediated dilation (FMD) of brachial artery (BA) induced by reactive hyperemia was examined by high-resolution vascular ultrasound. The intima media thickness of bilateral carotid artery was also measured. CA-IMT was defined as 1.5mm with any presence of plaque on either side of the carotid artery. All patients underwent echocardiographic exam to detect LVMH.

Results: Stepwise multiple regression analysis showed that VOI was an influencing factor for CA-IMT in all subjects. For an increase of 10mmHg of VOI, CA-IMT was thicker by 0.05mm, so as in EH patients. After stratification of age, sex and risk factors, VOI was found to be a persistent influencing factor for CA-IMT in hypertensives.

Conclusions: VOI was an important influencing factor for CA-IMT in EH patients.

GW25-e0433 Study on Correlation between Depression Severity of Primary Hypertension Patients and Level of Serum Homocysteine
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Objectives: This study mainly aims to provide an understanding of the status of patients, who go to the doctor for fluctuation blood pressure, and suffer from primary hypertension combined with depression, and to shed some light on the correlation between the depression severity and biochemical indexes including the Hcy level.

Methods: We use the Patient Health Questionnaire-9 (PHQ-9) to evaluate 165 cases of primary hypertension patients who have been treated with conventional therapy for nearly one week but still suffer from dissatisfaction. According to the results, the cases are divided into three groups, with 34 cases in Group I (without depression), 88 cases in Group II (mild or moderate depression) and 43 cases in Group III (moderately severe depression). Comparisons are made among the three groups in terms of the level of Hcy, LDL, HDL, hs-CRP and FIB. In addition, we make correlation analysis and regression analysis of the scores of PHQ-9 and GAD-7, age, Hcy, LDL, HDL, hs-CRP and FIB.

Results: (1) Differences as a result of comparison among the GAD-7 scores and the Hcy levels of the three groups respectively have statistical significance (P < 0.05 in all cases). The correlation result indicates that, in terms of the GAD-7 scores, difference between Group III and Group I is the biggest (4.71 ± 3.83 vs. 0.60 ± 3.36). (2) The PHQ-9 score is correlated with age, GAD-7 score and Hcy level (with the correlation coefficient of 0.158, 0.581 and 0.196 respectively and all P < 0.05). The GAD-7 score is correlated with the Hcy level (with the correlation coefficient of 0.206 and the P = 0.05). (3) Taking the PHQ-9 score as the dependent variable and the GAD-7 score, age and levels of Hcy, LDL, HDL, FIB, hs-CRP as the independent variables, a logistic regression analysis is made and the result indicates that the GAD-7 score, age, and the Hcy level enter the regression equation.

Conclusions: The Hcy level is a key factor impacting the primary hypertension patients with depression and is positively correlated with depression severity, with more severe depression for higher Hcy level. More attention should be given to the mental health of the primary hypertension patients.

GW25-e0791 Role of AT1 blockade on cardiac ACE2 and mas expression in hypertensive rats
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Objectives: Inter-regulation between components of the renin-angiotensin system (RAS) is common, but little is known about the direct regulatory roles of cardiac ACE2 and Mas expression. This study was to determine if the cardiac ACE2, ACE and Mas levels change in hypertensive rats treated with AT1 blocker, losartan and ACE inhibitor, enalapril.

Methods: Forty rats were divided into 4 groups: sham operated (n=10), rats with the correlation coefficient of 0.206 and the P = 0.05). (3) Taking the PHQ-9 score as the dependent variable and the GAD-7 score, age and levels of Hcy, LDL, HDL, FIB, hs-CRP and FIB as the independent variables, a logistic regression analysis is made and the result indicates that the GAD-7 score, age, and the Hcy level enter the regression equation.

Conclusions: The Hcy level is a key factor impacting the primary hypertension patients with depression and is positively correlated with depression severity, with more severe depression for higher Hcy level. More attention should be given to the mental health of the primary hypertension patients.

GW25-e1075 The incidence of cough in hypertensive population treated with ACEI (Lisinopril)
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Objectives: To observe the incidence and start time of cough in hypertensive popula-
tion treated with single Lisinopril. To investigate the relationship between cough and gender or age.

Methods: Ninety-seven mild hypertensive patients were enrolled to receive single Lisinopril treatment for at least four weeks. They were demanded follow-up visit every two weeks for 8 weeks after informed consent. The blood pressure (BP) was recorded as the average of 2 readings in each posture during each visit (standing posture following sitting posture). The mean value of BP and pulse in each posture and the start day of cough were recorded. All analyses were conducted using the SPSS package (version 13.0).

Results: Fifty male and 47 female with the course of hypertension from 5 months to 26 years were enrolled. The average age was 48.40±8.87 years. The BP after eluation was (138.79±14.29)/94.42±6.88 mmHg (sitting posture) and (139.28±15.50)/98.11±8.38 mmHg (standing posture). The pulse was 72.25±6.61/min (sitting posture) and 73.75±6.72/min (standing posture). There were 42 patients (22 male and 19 female) happen to cough after admitted Lisinopril. The incidence of cough adverse effect was 44.00% in male and 42.55% in female. The start day of cough were: 14 cases (33.3%) in 5 day; 12 (28.6%) in 6-10 days, 7 (16.7%) in 11-20 days, 5 (11.9%) in 21-30 days, and 4 (9.5%) in 31-40 days. There was no significant difference in the percentage of cough presented by age, gender or the course of hypertension. Careful clinical observation is recommended when Lisinopril or other ACEI has to be prescribed.

GW25-e1665 Association between Plasma Homocysteine Levels and Blood Pressure Variability in Patients with Primary Hypertension
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Objectives: To investigate the association between homocysteine (Hcy) level and blood pressure variability (BPV) in patients with primary hypertension.

Methods: A total of 154 patients diagnosed with primary hypertension (mean age: 56.48±7.95 years; 103 males) were enrolled. All patients underwent blood sample tests and 24 ambulatory blood pressure (ABP) monitoring and were divided into two groups according to their Hcy levels: normal-Hcy group (n=79) and high-Hcy group (n=75). Indices including age, gender, smoking history, blood biochemical test data, and ABP were statistically compared.

Results: The percentage of male patients in the high-Hcy group (82.7%) was significantly greater than that in the normal-Hcy group (P < 0.001). No office BP data differed significantly between the two groups. In the high-Hcy group, the nighttime SBP variability (14.67±5.74 mmHg) was significantly higher than in the normal-Hcy group (P = 0.034). In addition, the morning pressure surge in the high-Hcy group (20.62±15.01 mmHg) was significantly higher than in the normal-Hcy group (P = 0.001). Further, multiple linear regression showed that the interaction between Hcy and the nighttime SBP variability or the morning pressure surge was still significant after adjusting for the effect of age, gender, smoking and laboratory data. The nighttime-DBP surge and the morning pressure surge were both positively and significantly related to Hcy (P = 0.022 and P = 0.005, respectively).

Conclusions: Plasma Hcy levels were associated with the variability in nighttime SBP and the morning pressure surge in hypertensive patients. These findings suggest that increased night-time BPV and morning pressure surge may be a mediator for the link between hyperhomocysteinemia and target organ damage.

GW25-e2165 Left Ventricular Function Changes along with the Hypertension Progress in 2K-2C Rats
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Objectives: Cardiac remodeling and myocardial dysfunction come with hypertension is well known. However it is not clear what is going on with hypertension developed. Our study is to evaluate the left ventricular function changes along with the hypertension progress in two kidney-two clip (2K-2C) rats.

Methods: There were 18 rats assigned to a sham group and 2K-2C group (n=9, each) for 12 weeks. Blood pressure, weight, cardiac morphological changed and left ventricular ejection fraction, and diastolic function indexes were recorded at 1w, 4w, 8w and 12w.

Results: Along with hypertension progress, left ventricular mass indexes increased according with blood pressure elevated significantly (P < 0.001, compared to sham group). But left ventricular ejection fraction has no obvious difference between the