control at the mean time. Patients' height, body weight, systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) were recorded. VOI = 1.33*SBP/0.33*DBP. 133.5mmHg. 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 LVMI.

**Results:**

- The incidence of cough increased in hypertensive patients treated with ACE inhibitors compared to those treated with losartan or enalapril. Specifically, the incidence of cough was 33.3% in Group I (placebo), 26.9% in Group II (enalapril), and 19.5% in Group III (losartan) (P < 0.05).
- More severe depression was positively associated with increased night-time BPV and 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 organ damage.

**Conclusions:**

- The incidence of cough in hypertensive patients treated with ACE inhibitors differed significantly between the groups (P < 0.05).
- 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).
- The incidence of cough adverse effect was 44.0% in male and 42.55% in female. The start day of cough was: 14 (33.3%) in 5 days, 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 age, gender or the course of hypertension.

- Careful clinical observation is recommended when Lisinopril or other ACE inhibitors is to be prescribed.

**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 population treated with single Lisinopril. 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 changes and left ventricular ejection fraction, and diastolic function indexes were recorded at 1w, 4w, 8w and 12w.

**Results:**

- The incidence of cough adverse effect was 44.0% in male and 42.55% in female with single Lisinopril treatment. Cough present was high in 10 days (68.3%). The cough adverse effect was not significant difference in age, gender or the course of hypertension. Careful clinical observation is recommended when Lisinopril or other ACE inhibitors is 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-h 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 ABI 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).
  - 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 days, 12 cases (28.6%) in 6-10 days, 7 cases (16.7%) in 11-20 days, 5 cases (11.9%) in 21-30 days, and 4 cases (9.5%) in 31-40 days. There was no significant difference in age, gender or the course of hypertension.

- Careful clinical observation is recommended when Lisinopril or other ACE inhibitors is to be prescribed.

**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 enalapril.

- 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 dysarthroterony. 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, FIB, hs-CRP and CRP.

- 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 each case).

- Conclusions:

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

- 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 dysarthroterony. 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, FIB, hs-CRP and CRP.

- 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 each case).

- Conclusions:

  - The proportion of male patients in the high-Hcy group (82.7%) was significantly greater than that in the normal-Hcy group (P < 0.001).

- GW25-e1095

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 population treated with single Lisinopril.

- Methods:

  - Ninety-seven mild hypertensive patients were enrolled to receive single Lisinopril treatment after elution for three 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 elution was (138.79 ± 14.29/94.42 ± 6.88) mmHg (sitting posture) and (139.28 ± 15.05/98.11 ± 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) hypotenent after administered 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 days, 12 cases (28.6%) in 6-10 days, 7 cases (16.7%) in 11-20 days, 5 cases (11.9%) in 21-30 days, and 4 cases (9.5%) in 31-40 days. There was no significant difference in age, gender or the course of hypertension.

- Conclusions:

  - The incidence of cough adverse effect was 44.0% in male and 42.55% in female with single Lisinopril treatment. Cough present was high in 10 days (68.3%). The incidence of cough adverse effect was not significant different in age, gender or the course of hypertension. Careful clinical observation is recommended when Lisinopril or other ACE inhibitors is to be prescribed.