Objective morning blood pressure surge (MBPS) is associated with cystatin C. Glomerular filtration rate (GFR) was estimated using the abbreviated Modification of Diet in Renal Disease equations. The ambulatory BP was measured non-invasively for 24h by the Spacelab devices programmed to measure BP every 20 min during daytime and every 30 min during nighttime. Results The highest quartile of cystatin C distribution showed an older age and worse parameters of renal function (cystatin C, serum creatinine and eGFR) than the other groups. No differences for gender or diabetes were found. MBPS was higher in the fourth quartile compared to the first one (P < 0.01). The relationship between cystatin C, as well as eGFR, with MBPS was statistically significant as renal function comes down (r = 0.34 and r = 0.41, all P < 0.001). Multivariate regression analysis, MBPS was independently associated with age (P < 0.01), dipping status (P < 0.001) and cystatin (P < 0.001).

Conclusions MBPS was independently associated with serum cystatin C level in essential hypertensive patients.

GW26-e0676 The impact of different periods of dynamic pulse pressure index on the target organ damage in hypertensive patients Xudong Wang, Yan Chun Ding Department of Cardiology V, the Second Affiliated Hospital of Dalian Medical University

Objectives To explore the impact of different periods of the dynamic pulse pressure index (PPI) on hypertensive target organ damage (TOD).

Methods 552 hypertensive patients were enrolled. 24-hour, day and night PPI were calculated based on 24-hour ambulatory blood pressure measurement results. Each period of PPI were divided into PPI<0.4 group and PPI>0.4 group. All patients were examined by echocardiography, incidence of the TOD of heart, brain, carotid, renal and retinal in hypertensive patients in 24-hour, daytime and nighttime PPI>0.4 group were higher than that of the PPI<0.4 group (P<0.05). 4. Correlation analysis shows that the evidences of heart, brain, carotid, renal and retinal damage are positively correlated with 24-hour, day and night PPI. Stepwise regression analysis show that in hypertensive patients increasing daytime PPI is an independent risk factor for left ventricular hypertrophy; nighttime PPI increasing is an independent risk factor for increasing of IMT and CysC.

Conclusions 1. PPI has gender difference. Female is predominant in PPI<0.4 group. 2. The 24-hour, daytime and nighttime PPI of hypertensive patients with TOD are significantly higher than those without TOD. 3. The incidence of different hypertensive TOD in 24-hour, daytime and nighttime PPI>0.4 group is higher than that in PPI<0.4 group. 4. There are different effects of different periods PPI on hypertensive TOD, while increasing daytime PPI is an independent risk factor for left ventricular hypertrophy and increasing nighttime PPI is an independent risk factor for IMT thickening and kidney damage.

GW26-e0802 Decreased Soluble VEGFR2 and Increased Visfatin Expressions in Hypertensive and Hypertensive Diabetic Patients Shujie Yu1, Hui Zhang2, Min Wang3, Bin Zhou1, Lin Wu4, Zhiming Song5, Lin Chen1, Xiaolian Qian1

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Objectives To evaluate the expressions of soluble vascular endothelial growth factor receptor 2 (sVEGFR2) and visfatin in plasma of hypertensive and hypertensive diabetic patients. And to explore the correlation between sVEGFR2 and visfatin in the whole study population.

Methods In this cross-sectional study, eighty-eight cases were included in hypertensive group (n=31), hypertensive diabetic group (n=31) and control group (n=26). Blood pressure was obtained from each participant with mercury sphygmomanometer. The expressions of sVEGFR2 and visfatin were measured by ELISA. Serum lipid profile, glucose and glycylated hemoglobin A1C (GhBa1C) levels were detected.

Results The levels of total cholesterol (TC) and body mass index (BMI) were significantly higher in the hypertensive group than those in control group (P<0.05). The levels of TC, triglyceride (TG), low density lipoprotein cholesterol (LDL-C), BMI, waist circumference were significantly higher in the hypertensive diabetic group than...
those in control group \((P<0.05)\). The mean plasma level of sVEGFR2 in both hypertensive diabetic group and hypertensive group was significantly decreased compared to that in the normal group \((P<0.05)\). While the mean plasma level of sVEGFR2 in hypertensive diabetic group were significantly decreased compared to the hypertensive \((P<0.05)\). And the mean plasma level of visfatin in both hypertensive diabetic group and only hypertensive group was significantly increased compared to that in the normal group \((P<0.05)\), and more increased in hypertensive diabetic patients. \((P<0.05)\). Moreover, there was a significantly negative correlation between sVEGFR2 and visfatin in the whole study population \((r=-0.497, P<0.01)\).

CONCLUSIONS Soluble VEGFR2 expression is decreased in both hypertensive and hypertensive diabetic patients, and more decreased in hypertensive diabetic patients. This study indicates that decreased sVEGFR2 level may be associated with to the increase of visfatin.

GW26-e1329
The prevalence and risk factors of postprandial hypotension in patients with coronary heart disease
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OBJECTIVES The main feature of postprandial hypotension (PPH) is the blood pressure being lower compared with that before a meal, and it may lead to syncope, fall, dizziness, nausea, visual disturbance, cardiovascular events, brain stroke and even death when it has a sharply fall. This study focuses on patients with coronary heart disease to explore the prevalence of PPH among patients with coronary heart disease and relevant risk factors.

METHODS Choose 289 patients with coronary heart disease, age range: 24-90, average age: 62.00±12.22 years old. All patients are divided into different groups on the basis of age and different groups by basic systolic blood pressure level. The blood pressure of patients need to be measured before breakfast, lunch and dinner as well as 30, 60, 90 and 120min after meals.

RESULTS The systolic blood pressure of a total of 50 cases of 289 patients drops ≥20mmHg, and the prevalence of PPH is 17.30%. There are 28 males (9.69%) and 22 females (7.61%) and the prevalence difference of PPH has no statistical significance \((P>0.05)\). The difference of PPH among patients with diabetes, cerebrovascular disease, hypertension, hyperlipemia has no statistical significance \((P>0.05)\). Among patients with taking medications which affect the blood pressure the prevalence is 15.57%; and the patients without taking medications which affect the blood pressure have PPH along with incidence is 17.5%; the difference of PPH has statistical significance \((P<0.05)\). The prevalence of PPH for different age groups has no statistical significance \((P>0.05)\). The prevalence of PPH of breakfast, lunch and dinner is 8.10%, 5.19% and 9.00%, the prevalence of PPH for different mealtime has no statistical significance \((P>0.05)\). Moreover, there was a significantly negative correlation between sVEGFR2 and visfatin in the whole study population \((r=-0.497, P<0.01)\).

CONCLUSIONS Soluble VEGFR2 expression is decreased in both hypertensive and hypertensive diabetic patients, and more decreased in hypertensive diabetic patients. This study indicates that decreased sVEGFR2 level may be associated with to the increase of visfatin.

GW26-e3511
Renal sympathetic denervation for refractory hypertension after renal artery stent placement
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OBJECTIVES To investigate the effects of irbesartan combined with diltiazem on the endothelium-dependent vasodilatation in Chinese essential hypertensives.

METHODS 142 Chinese hypertensives were enrolled in this study. Hypertensive patients were divided into 3 groups: Irbesartan treated (150 mg/day, n=42), diltiazem treated (90 mg/day, n=50), and combined therapy (Irbesartan 150 mg/day + diltiazem 90 mg/day, n=50). 26 normotensives without cardiovascular risks served as control group. Flow-mediated dilatation (FMD) induced by reactive hyperemia was used to determine endothelium-dependent dilatation (EED) and nitroglycerin-mediated dilatation (NMD) induced by nitroglycerin was used to determine endothelium-independent dilatation (EID) respectively in brachial arteries using high-resolution vascular ultrasound. Left ventricular mass index (LVMI) was evaluated by eco-cardiography, Blood pressure (BP) and fibrinogen (Fg) was monitored at baseline and after treatment. All subjects were followed up for 1 year.

RESULTS BP, LVMI, Fg were higher and FMD and NMD were lower in hypertensive patients than those in normotensive controls at base-line. After 1-year treatment, there was a significant increase of FMD in combined therapy group compared with irbesartan treated group and diltiazem treated group \((8.31\% \pm 3.09\% \text{ vs } 10.68\% \pm 5.10\%, P<0.05)\), after stratification of age, while there was no significant difference in NMD after therapy among three groups \((P>0.05)\). FMD decreased obviously with the increase of age, which turned out to be not so obviously after irbesartan combined with diltiazem treatment compared with no treatment controls. In diltiazem, Fg decrease significantly after treatment in combined therapy group \([3.57\% \pm 0.78\% \text{ g/L vs } 3.09\% \pm 0.83\% \text{ g/L, } P<0.05]\). LVMI also reduced obviously after irbesartan alone and combined therapy treatment and the reduction of LVMI was much more remarkable in combined therapy group than in irbesartan group \([\text{irbesartan group: } (98.93\% \pm 16.93) \text{ g/m}^2 \text{ vs } (88.70\% \pm 16.21) \text{ g/m}^2, P<0.01]\).

CONCLUSIONS Irbesartan combined with diltiazem therapy could improve the endothelium dependent vasodilatation in essential hypertensives significantly, regardless of age, further reduced LVMI and Fg more obviously compared with monotherapy. Therefore, irbesartan combined with diltiazem might be more beneficial for reducing the cardiovascular complications in hypertensives and presented superior cardiovascular protection than monotherapy.

GW26-e4713
Factors associated with morning blood pressure surge in young and middle-aged essential hypertensive patients
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OBJECTIVES The study aimed to explore possible factors associated with morning blood pressure surge, underlying pathophysiological mechanisms and the target of drug therapy in young and middle-aged essential hypertensive patients.

METHODS The objects included in this study were 160 young and middle-aged (younger than 60 years) essential hypertensive patients who were in the ward of hypertension in Peking University People’s Hospital from November 1, 2011 to January 31, 2015. All the objects...