METHODS A total of 111 people aged 80 and over were divided into two groups according to the ABI: low ABI group (ABI < 0.9, n = 56) or normal ABI group (ABI > 0.9, n = 55). Then they were divided into two groups according to the blood pressure: Hypertension group (HG, n=48) or normal group (NG, n=63). Ambulatory blood pressure monitoring was performed for all patients.

RESULTS 24h mean diastolic blood pressure (24hDBP) [66.2±11.20 mmHg vs (70.1±11.81) mmHg, day mean diastolic blood pressure (dDBP) [67.25±7.81 mmHg vs (70.6±8.70) mmHg], night mean diastolic blood pressure (nDBP) [64.65±12.08 mmHg vs (69.16±10.00) mmHg] were significantly lower in low ABI group than in normal ABI group. 24 hour systolic blood pressure variability (24hSBPV) [12.80±6.66 mmHg vs (14.14±3.64) mmHg] were significantly lower in low ABI group than in normal ABI group, night mean systolic blood pressure variability(nSBPV) [11.99±4.19 mmHg vs (9.97±4.05) mmHg] were significantly higher in lowABI group than in normal ABI group. (all P<0.05). 24hSBPV [14.87±3.90 mmHg vs [13.20±3.41] mmHg], nSBPV [12.27±5.50 mmHg vs(10.31±3.95) mmHg] were higher in HG than NG, ABI [0.98±0.21] (1.07±0.20) were lower than NG (P<0.05).

CONCLUSIONS 24hDBP, dDBP, nDBP, 24hSBPV, nSBPV may be the risk factors of low ABI in people aged 80 and over. nSBPV is an independent risk factor.

GW26-e2109 Blood pressure profile, left ventricle remodeling and endothelial dysfunction in patients with arterial hypertension and COPD
Demiokhova Nadia, Vynnychenko Lyudmyla, Vynnychenko Klaudia
Sumy State University

OBJECTIVES Chronic overload of the left ventricle in hypertension leads to structural and morphological reorganization of the myocardium, which combines the concept of ”remodeling”, which is characterized by the presence of hypertrophy, dilatation and changes in the geometry of the heart cavities and myocardium as a whole, and ultrastructure of myocardium, which is ultimately remodeling of the myocardium and the integral substrate that determine the occurrence and progression of heart failure.

To evaluate the relationship of endothelial dysfunction with blood pressure (BP) daily profile and type of left ventricle (LV) remodeling in hypertensive patients with COPD.

METHODS We examined 120 patients with arterial hypertension and COPD. Assessment of systolic and diastolic LV function, condition vasomotor function using Doppler brachial artery during reactive hyperemia and drug, HDI1XE-Phillips, USA. Daily BP monitoring was carried out for 24 hours on CardioTens-01-Meditech, Hungary.

RESULTS Analysis of vasomotor function in patients with BP profiles showed that the diameter of the brachial artery was the greatest in patients with profile type night-peaker, and was 4.25(3.80;5.00), followed by patients with non-dipper 4.00(3.70;4.60), dipper 3.80(3.50;4.50), higher in HG of group than in NG, ABI [0.98±0.21] (1.07±0.20) were lower than NG (P<0.05).

Conclusions: Blood pressure profile, left ventricle remodeling and endothelial dysfunction in patients with arterial hypertension and COPD.

GW26-e3542 Morning Blood Pressure Surge is Associated with Serum Brain Natriuretic Peptide in Essential Hypertensive Patients
Dengfeng Gao, Huijuan Kou, Ru Ma
Second affiliated hospital of Xi’an Jiaotong University

OBJECTIVES The phenomenon that blood pressure rises sharply in the morning is called “Morning Blood Pressure Surge” (MBPS). It has been shown to better reflect cardiovascular risk than mean BP in hypertensive patients. This study investigated the correlation of brain natriuretic peptide (BNP) to MBPS in patients with essential hypertension.

METHODS We included 538 hypertensive patients who had ambulatory blood pressure monitoring at our hospital from 2012 to 2014. We examined MBPS and assessed the serum BNP level at the baseline.

RESULTS Mean MBPS was 14.0±10.8. MBPS was positively correlated with age (r=0.341, P<0.001), body mass index (r=0.216, P=0.012) and log-transformed BNP (r=0.452, P=0.001), daytime augmentation index adjusted for heart rate (r=0.253, P<0.012).From the 25th to 75th quartile of MBPS, log-transformed BNP increased significantly (F_{4,22}<0.001). In multivariate linear regression analysis, MBPS was independently associated with age (P<0.01), dipping status (P<0.001) and logBNP (P<0.001).

CONCLUSIONS MBPS was independently associated with serum BNP level in essential hypertensive patients.