difference in values between two averages were in the order of $2/3A-10A<5A-10A<3A-10A<2A-10A$ ($P<0.05$), both in SBP and DBP. In SBP readings of group 3, the order was $2/3A-10A<5A-10A<3A-10A<2A-10A$ ($P>0.05$), and in DBP readings, $5A-10A<2/3A-10A<3-A-10A<2-A-10A$ ($P>0.05$). **Conclusion:** Blood pressure measurement with an electronic automatic blood pressure monitor should be performed at least three times on each occasion.

0249
Effects of amlodipine combined with telmisartan or with amiloride on QTc and QTcd in hypertensive patients with left ventricular hypertrophy

YAPING WANG, QUN LU, XIN WANG, YONG ZHANG, GANG TIAN
Department of Cardiology, First Affiliated Hospital of Medical College of Xi'An JiaoTong University, Xian, Shanxi, China

Objective: To investigate the effects of different antihypertensive therapies on corrected QT intervals (QTc) and corrected QT dispersion (QTcd) in hypertensive patients with left ventricular hypertrophy (LVH). **Methods:** 61 hypertensive patients were taken as hypertensive group. 51 hypertensive patients with LVH [male 28, female 23, average age (61.8 ± 7.0)] were randomly assigned to receive low-dose amlodipine (2.5 mg/d) plus telmisartan (40 mg/d) or low-dose amlodipine (2.5 mg/d) plus compound amiloride (0.5 tablet/d). All the patients were followed up for 1 year. Baseline and 1 year left ventricular mass index (LVMI), QTc and QTcd were examined. 56 normotensive individuals were taken as control. **Results:** The QTc and QTcd in hypertensive LVH patients were significantly higher than those in control (all $P<0.05$). Mean blood pressure, LVMI, the QTc and QTcd at baseline were similar between amlodipine with telmisartan and amlodipine with amiloride group, respectively. After 1 year treatment, in the amlodipine with telmisartan group and amlodipine with amiloride group, the blood pressure was controlled significantly in each group, respectively (all $P<0.05$). IVST, LVMI and left ventricular posterior wall thickness (LVPWT), QTcd were decreased, respectively, which differed significantly compared with baseline (all $P<0.05$). The amlodipine with telmisartan group was better than the amlodipine with amiloride group in decreasing blood pressure, LVMI and QTcd (all $P<0.05$). **Conclusion:** The combination of amlodipine and telmisartan was better than amlodipine with amiloride group in controlling blood pressure, attenuating LVH and improving the heterogeneity of ventricular repolarization.

0330
The effect of blood pressure rhythm on the left ventricular structure and function in elderly systolic hypertensive patients

XINYUE CHEN, XIAOJUAN BAI
Department of Gerontology and Geriatrics, the First Affiliated Hospital of China Medical University, Shenyang, China

Objective: The aim of this study was to investigate the effects of blood pressure rhythm on the left ventricular structure and function in elderly systolic hypertensive patients. **Methods:** 94 elderly systolic hypertensive patients were evaluated by echocardiography and ambulatory 24-h blood pressure monitoring, and 84 patients with non-dipper blood pressure pattern and reverse dipper blood pressure pattern are included into our further research. All the patients received fixed antihypertensive drug therapy for at least 3 months prior to the evaluation. The systolic and diastolic parameters derived from the tissue Doppler examination were compared between non-dipper group and reverse dipper group. **Results:** Abnormal blood pressure rhythm was found in 93% elderly systolic hypertensive patients, including 55 non-dipper blood pressure patterns (58%) and 22 reverse blood pressure patterns (35%). Compared with non-dipper blood pressure pattern, reverse dipper patients had significant difference for aortic diameter (mm) (31.36 ± 5.12, 26.57 ± 4.49), left ventricular septum thickness (mm) (1.21 ± 2.50, 9.66 ± 1.13), left ventricular posterior wall thickness (mm) (9.76 ± 1.41, 9.02 ± 1.02), and stroke volume (ml) (45.05 ± 17.36, 61.10 ± 16.24) ($P<0.01$). There was a difference between reverse dipper group and non-dipper group for ejection fraction (%) (46.26 ± 12.66, 55.21 ± 10.53), left ventricular mass (g) (224.89 ± 43.32, 192.72 ± 61.02), and left ventricular mass index (g/m^2) (124.13 ± 22.54, 105.39 ± 32.62). **Conclusion:** Blood pressure rhythm is one of the most important effect factors on target organ in elderly systolic hypertensive patients. Reverse dipper blood pressure patterns influence more on left ventricular structure and functions than non-dipper group.

0362
Blood pressure measured by Omron HEM-7012 electronic sphygmomanometer in childhood population

DONGQING HOU, XINYING SHAN, JIE MI
Capital Institute of Pediatrics, Beijing, China

Objective: Blood pressure (BP) measured by electronic sphygmomanometer, as a convenient and precise method, is recommended for adult to monitor their BP, but there is no evidence to show if BP measured by electronic sphygmomanometer can be used in children in China. This study aimed to evaluate the measuring accuracy of the Omron HEM-7012 electronic sphygmomanometer compared with the Riva-Rocci sphygmomanometer. **Methods:** 86 children (age 2–18 years) participated in the study. Anthropometry was obtained: weight, height and right upper-arm circumference. BP was measured with the right arm for 8 times, the first/second/fourth/sixth/eighth BP was measured by Riva-Rocci sphygmomanometer, two surveyors recorded the data with head stethoscope simultaneously; the third/fifth/seventh BP was measured by Omron HEM-7012 electronic sphygmomanometer (using the small size cuff if the right upper-arm circumference was under 24 cm), two measurements were performed at intervals of 1 min, and at the interval record the heart rate. **Results:** The mean age of the study population was 8.8 ± 3.2 years, the mean of the right upper-arm circumference was 19.3 ± 3.5 cm, and 75(87.2%) children used the small size cuff. The mean of SBP (systolic pressure) and DBP (diastolic pressure) measured by the Riva-Rocci sphygmomanometer and Omron HEM-7012 electronic sphygmomanometer was 104 ± 13 mm Hg and 102 ± 13 mm Hg, 63 ± 11 mm Hg and 58 ± 8 mm Hg. SBP and DBP measured by the two methods were significantly correlated (correlation coefficient was 0.825 and 0.676, $P<0.001$). Paired-sample t-test showed the difference was significant between SBP and DBP measured by the Riva-Rocci sphygmomanometer and Omron HEM-7012 electronic sphygmomanometer (t $=-3.248$ and 10.225 for SBP and DBP, $P<0.01$). 87.2% relative error for SBP measured by the two methods was less than 10%, 47.7% for DBP. **Conclusions:** BP measured by the Omron HEM-7012 electronic sphygmomanometer was significantly associated with BP measured by the Riva-Rocci sphygmomanometer.