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northermally. ‘Dipper’ are the ones whose systolic blood pressure decrease >10% at night and ‘nondipper’ are the whose ones systolic blood pressure decrease less than 10% at night. In the nondippers group cardiovascular morbidity and mortality are increased. Myocardial performance index (MPI) is a relatively new index which can be used in evaluation systolic and diastolic performance and may have prognostic value for a variety of heart diseases. Our aim in this study is to search for the effect of diurnal blood pressure on myocardial performance index and aortic elasticity parameters in essential hypertensive patients.

Our study comprised 30 dippers, 31 nondippers hypertensive patients and 25 healthy volunteers. Ambulatory blood pressure monitoring (ABPM) was hooked-up to hypertensive patients and they were grouped as dippers and nondippers. All individuals were measured aortic elasticity parameters and MPI by used to traslhoracic echocardiography (Figure 1).

The groups are similar in term of age, sex, body mass index, using cigarette and biochemical parameters. There was no significant difference between the groups in terms of MPI (p=0.110). Aortic strain index was lower in control group than dipper hypertensive and nondipper hypertensive group (p<0.0001, p<0.0001 respectively), and distensibility index was lower in control group than dipper and nondipper hypertensive group (p<0.0001, p<0.0001 respectively). The index of aortic stiffness; there was no significant difference between the control and dipper hypertensive groups (p=0.0387). However, the aortic stiffness index in nondipper hypertensive group was higher than dipper hypertensive group (p<0.0001).

In our study we found a relationship among nondipper hypertension decreased aortic strain and aortic distensibility and increased aortic stiffness. Also, dipper hypertension related to decreased aortic strain and aortic distensibility. Nondipper hypertensive group has more increased cardiovascular event and morality. In this context, patients with hypertension should be followed with ABPM. Therefore nondipper hypertensive patients which have a higher risk can be identified. Thus, efforts for controlling blood pressure in nondipper hypertensive patients provide better risk modification.

PP-040
Correlation between Left Ventricular Mass Index and Calcium Metabolism in Patients with Essential Hypertension
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Introduction: Essential hypertension is a multifactorial condition affecting a large percentage of the adult Turkish population (33.7%). It induces left ventricular hypertrophy (LVH) and dilatation, which can lead to heart failure. The reasons for the development of LVH in patients with essential hypertension have not been established, and whether or not LVH results from long-term blood pressure (BP) elevation or non-hemodynamic factors affecting the myocardium is still a matter of debate. The purpose of the present study was to determine the relationship between calcium metabolism and hypertension by comparing healthy individuals and patients newly diagnosed with mild and moderate essential hypertension, and to elucidate the role of non-hemodynamic factors in the development of LVH in the hypertensive group.

Material-Methods: Twenty-seven patients with essential hypertension and 20 healthy individuals were compared with respect to calcitropic hormones, left ventricular mass index (LVMI), and urinary and serum biochemical parameters (Table 1) (Table 2). The correlations between parathormone, vitamin D, and calcitonin levels and LVMI and blood pressure elevation were determined. Written informed consent was obtained from each subject following a detailed explanation of the objectives and protocol of the study which was conducted in accordance with the ethical principles stated in the “Declaration of Helsinki” and approved by the institutional ethics committee. The data were analyzed using the Statistical Program for the Social Sciences (version 10.0, SPSS, Inc., Chicago, IL, USA).

Results: The parathormone level was significantly higher (p=0.006) and vitamin D level was significantly lower (p=0.01) in the patient group compared with the control group. However, the two groups were similar in terms of albumin-corrected calcium levels, which were within the normal range (p=0.988). The serum sodium (p=0.014) and urinary calcium (p=0.003) levels and LVMI (p<0.01) were also significantly higher in the patient group. No significant correlations were determined between ambulatory blood pressure and parathormone and vitamin D levels, but a significant correlation was found between LVMI and parathormone level (p=0.06) in hypertensive patients.

Discussion: We suggest that essential hypertension alters calcium metabolism. Specifically, calcitresis develops secondary to hypocalcemia, with a compensatory release of PTH. Meanwhile, the increased levels of PTH cause a rise in general protein synthesis, which leads to the development of myocardial hypertrophy. However, since the small sample size of our present study precludes our ability to draw precise conclusions, an in-depth analysis of the relationship between PTH, vitamin D, and blood pressure, future large-scale studies, is warranted.

PP-041
Exaggerated Systolic Blood Pressure During Treadmill Test in Pre-Hypertensive Patients with Dilatation of Ascending Aorta
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Aim: Preshyptertension is a clinical condition in which imitation of antihypertension therapy other than lifestyle modification was disputable. Additionally there is not a provocative test which could clarify whether the blood pressures innocently continue below the high normal ranges. Moreover, aortic diameter which is out of the normal visual perspective since the ascending aorta is generally overlooked during an echocardiographic examination at parasternal long axis view. So we aimed to evaluate the aortic diameters measured at ascending aorta in pre-hypertensive patients and to analyze the systolic and diastolic blood pressure and also heart rate response during the initiation, stage 0, 1, 2 and 3 and recovery period of treadmill test.

Material-Method: We retrospectively evaluated the medical recordings including aortic root and ascending aorta from the echocardiographic examination report and systolic and diastolic blood pressure and heart rate responses measured at initiation, 1st, 2nd, 3rd stage and recovery period of treadmill test. We excluded the subjects with coronary artery disease, hypertension, congestive heart failure, and aortic aneurysm (ascending aorta >40 mm) from the study. We compared those measurements obtained from the treadmill test among groups designed according diameter of ascending aorta ≤35 mm (normal subjects) and >35 mm (subjects with aortic dilatation).

Results: Age of study groups was not statistically different. Comparison of mean diameter of aortic root and ascending aorta was as follows (32.8±1.49 vs 32.9±1.27, p=0.69) and (34.5±1.96 vs 35.9±1.10, p=0.00), respectively. When we compared the SBP, DBP and HR responses during TT we observed that SBP tended to increase to a higher state in pre-hypertensive subjects with dilated aorta compared to ones with normal aorta (Figure 1). However there was not such a tendency to increase in DBP and HR in those subjects. Also heart rates were surprisingly lower in those subjects at the initial period. Increased pressure to aortic baroreceptor might have been probably caused the heart rate to be reflectively reduced.