Subjects with maternal history of hypertension had significantly higher average 24 h systolic BP compared to subjects with no history of parental hypertension (mean difference 7.95 with 95% confidence intervals 0.77 to 15.13 mmHg, Post Hoc Tukey's analysis). No statistically significant differences were found between the other groups.

Conclusions: Offspring with maternal family history of hypertension had higher 24 h systolic BP levels suggesting a possible maternal factor for the emerge of high blood pressure.

PP.14.18 BLOOD PRESSURE MEASUREMENT: THE WAITING TIME BETWEEN READINGS

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Objective: It is recommended to wait at least 1 minute between blood pressure (BP) readings. However there is insufficient evidence on the usefulness of this recommendation using a validated automatic device. The aim was to assess differences in BP according to the waiting time between BP readings.

Methods: Cross-sectional descriptive study in an ambulatory setting with convenience sampling of 150 hypertensive patients. We excluded subjects with atrial fibrillation, or with body mass index higher than 40 kg/m2 or lower than 18 kg/m2.

Patients were seated for 5 minutes before 6 basal BP readings were taken with a validated device (Tensoval Duo Control, Hartmann): 3 BP measurements with no waiting time (noWT) between them and 3 BP measurements with 1 minute of waiting time (1mWT) between each reading, in random order. The first BP reading of each tercet was eliminated from the analysis. The intraclass correlation coefficient (ICC) was calculated between noWT and 1mWT mean BP measurements, with 95% confidence intervals.

Results: 49.3% women, mean age 65.6 ± 12.8 years, mean BP $137 \pm 1.4/80 \pm 0.9$ mmHg, 37.3% with diabetes mellitus and 21.3% with associated cardiovascular disease.

Mean systolic BP (SBP) for noWT and for 1mWT was 135.9 ± 18.3 mmHg and 137.3 ± 18.9 mmHg ($p = 0.045$), respectively. Mean diastolic BP (DBP) was 79.2 ± 12.6 and 79.8 ± 13.0 mmHg ($p = 0.409$), respectively. There was 2.2 ± 10.3 mmHg and 1.2 ± 8.7 mmHg between the second and third SBP readings for 1mWT ($p = 0.009$) and noWT ($p = 0.09$), respectively. ICC between noWT and 1mWT were 0.946 (95% CI: 0.925–0.961) and 0.877 (95% CI: 0.831–0.911) for SBP and DBP, respectively.

Conclusions: BP measurement with 1 minute of waiting time between readings obtains SBP values significantly higher than the BP measurement without time interval between readings. These differences are not clinically relevant. The agreement between noWT and 1mWT is very good.

PP.14.19 HOME BLOOD PRESSURE MEASUREMENTS ARE SUPERIOR TO CLINIC AND AMBULATORY MEASUREMENTS IN PREDICTING TARGET-ORGAN DAMAGE IN HYPERTENSION

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Objective: To compare home (HBP) vs. clinic (CBP) vs. ambulatory blood pressure (ABP) in terms of their association with hypertension-induced target-organ damage.

Methods: A total of 128 untreated subjects (mean age, 50.9?b10.8 years, 70 men) with elevated blood pressure (BP) had measurements of CBP (3 visits, oscillometric device Microlife WatchBP Office), HBP (7 days, oscillometric device Microlife WatchBP Home) and ABP (24-hours, oscillometric devices SpaceLabs 90207/90217 or Microlife WatchBP O3). Target-organ damage was assessed by echocardiographic left-ventricular mass index (LVMI), microalbuminuria (MAU) (two first-morning spots) and carotid-femoral pulse-wave velocity (PWV; Complior).

Results: LVMI was correlated with systolic BP (HBP/CBP $r = 0.45/0.39$ and ABP 24 h/day/night $r = 0.29/0.24/0.32$, all $p < 0.01$) and diastolic HBP ($r = 0.24$, $p = 0.01$) and nighttime ABP ($r = 0.21$, $p = 0.02$). LVMI was also correlated with all pulse pressure (PP) values (home $r = 0.37$, $p < 0.001$; clinic $r = 0.30$, $p = 0.001$; ambulatory $r = 0.24/0.23/0.25$, 24 h/day/night, all $p = 0.01$). MAU was correlated with systolic HBP ($r = 0.28$, $p < 0.01$), CBP ($r = 0.26$, $p < 0.01$) and daytime ABP ($r = 0.23$, $p = 0.01$) and all PP values (home $r = 0.34$, $p < 0.001$; clinic $r = 0.34$, $p < 0.001$; ambulatory 24 h/day/night $r = 0.30/0.33/0.23$, all $p = 0.01$). PWV was correlated only with systolic HBP ($r = 0.22$, $p < 0.05$) and all PP values (home $r = 0.33$, $p = 0.001$; clinic $r = 0.23$, $p < 0.05$; ABP 24 h/day/night $r = 0.26/0.24/0.29$, all $p < 0.05$). In stepwise linear-regression models (dependent variables: age, sex, body mass index [BMI], systolic and diastolic CBP, HBP and ABP; entry/removal criteria of F 0.05/0.1), LVMI was predicted only by systolic HBP ($p < 0.001$) and BMI ($p = 0.01$). In a similar model for PWV, predictors were systolic HBP ($p = 0.03$) and age ($p = 0.001$). Finally, MAU was primarily predicted by systolic HBP ($p < 0.01$) (entry/removal criteria of F 0.01/0.05).

Conclusion: These data suggest that home BP is more closely associated with hypertension-induced target organ damage compared to office or ambulatory BP measurements.

PP.14.20 A RANDOMISED CONTROLLED TRIAL OF TELEMONITORING AND SELF MANAGEMENT IN THE CONTROL OF HYPERTENSION: TELEMONITORING AND SELF MANAGEMENT IN HYPERTENSION (TASMINH2): QUALITATIVE STUDY

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Objective: The TASMINH2 trial was designed to evaluate home monitoring of blood pressure and self-titration of medication by patients with poorly controlled blood pressure. There is no previous evidence regarding how patients feel about self-managing in this way. This study aimed to explore patients' views and experiences of self-monitoring and titration of medication.

Methods: Patients were trained to self-monitor their blood pressure, interpret the readings and adjust their medication, if required, according to a plan agreed in advance with their general practitioner. This qualitative study involved semi-structured interviews undertaken in patients' homes. Topics covered included: knowledge and understanding of hypertension; experience of study training, self-monitoring and adjusting medication; preference for self-management versus usual care. Interviews were tape-recorded and transcribed and continued until theoretical saturation was reached. Constant comparative analysis was used.

Results: 23 patients were interviewed. They found the monitor easy to use and were positive about self-monitoring. Many felt their home readings (2 readings taken 5 minutes apart daily for one week, repeated monthly for a year) were more valid than the single office readings they had previously experienced. Patients did not like taking medication but accepted that it was necessary and all reported being adherent. The sample included both patients who implemented medication changes in accordance with the study protocol and those who chose not to. Patients were more comfortable about making a medication change if their blood pressure readings were substantially above target but were reluctant to implement a change if their readings were borderline, even when they had previously made a medication change successfully. Many patients planned to continue self-monitoring after the study finished and report home readings to their general practitioner.

Conclusions: Patients are willing to be more involved in decisions on medication. Giving patients the ability to measure their own blood pressure and the knowledge to interpret their readings has enabled them to make an informed choice over whether to increase their medication when their readings are borderline normal/raised.

PP.14.21 AUTOMATED OFFICE BLOOD PRESSURE MEASUREMENTS COULD REDUCE THE NEED FOR PERFORMING 24-H AMBULATORY BLOOD PRESSURE MEASURING IN CLINICAL PRACTICE

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Objective: To investigate whether automated office blood pressure (AOBP) is more closely related to cardiac damage than 24-h ambulatory blood pressure measuring (ABPM) in untreated hypertensive patients.

Design and Method: Thirty-four hypertensive subjects (17 males, 17 females, age 53¡À14 years) were enrolled. In order to eliminate white-coat response, patients were alone in the examination room during AOBP measurement by the Microlife Watch BP office device. Twenty-four-hour ABPM was performed with an automatic oscillometric device at 15-min intervals during daytime and 30-min intervals during night. All participants underwent cardiac ultrasonography by a trained physician blinded to the patient's blood pressure measurements. Left ventricular mass index (LVMI) was calculated using the Devereux formula indexed to body surface area. Left ventricular hypertrophy (LVH) was defined as LVMI ¡Ý125 g/m2 (men) and ¡Ý110 g/m2 (women). The peak velocity of early rapid filling (E-wave velocity) and that of atrial filling (A-wave velocity) were recorded and the ratio of E-wave to A-wave (E/A) was calculated. Diastolic dysfunction was defined as an E/A ratio lower than one. The relation between AOBP and awake ABPM measurements with LVMI was investigated using linear regression. Based on AOBP and awake ABPM readings, logistic regression models were applied to predict diastolic dysfunction and LVH and to construct ROC curves for the two modalities.

Results: Both AOBP and awake ABPM readings were significantly correlated with LVMI ($r = 0.60$, $p = 0.001$ and $r = 0.57$, $p = 0.001$ respectively) with AOBP measurements having a slightly better predictive ability ($r2 = 0.36$ vs $r2 = 0.32$). AOBP and awake ABPM could both predict diastolic dysfunction, with AOBP having a greater area under the ROC curve (0.753 vs. 0.721, non-significant difference $p = 0.7$). AOBP and awake ABPM were moderately good predictors of LVH with areas under the ROC curve 0.643 vs. 0.717, non-significant difference ($p = 0.43$).

Conclusions: A carefully performed office BP measurement may reduce the need to perform 24-h ABPM since it can detect an abnormal left ventricular remodeling pattern and diastolic dysfunction equally as well.

PP.14.22 TWENTY FOUR-HOUR PROFILE OF BLOOD PRESSURE AFTER 60-MINUTES LASTING CARDIAC EXERCISE TRAINING IN PATIENTS AFTER MYOCARDIAL INFARCTION

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Objective: The aim of the study was to compare 24-hour course of blood pressure immediately after the exercise training with the values from the following day when the patients after myocardial infarction did not exercise.

Method: The group being monitored consisted of 23 patients after myocardial infarction of the age 63 ± 6.3 years and ejection fraction 43 ± 12.3 %. In the course of cardiac rehabilitation (aerobic and resistance training, lasted 60 minutes), the patients were subjected to 7-day ambulatory blood pressure monitoring (AD TM2421 Japan). During 7-day blood pressure monitoring their pharmacotherapy was not interrupted and consisted of ACE inhibitors, betablockers and statins.

Results: The mean values of 24-h blood pressure profile (systolic ad diastolic) did not differ between the day with exercises and the day without exercise (120 ± 9 versus 120 ± 8mmHg, 72 ± 8 versus 72 ± 8mmHg). Comparison of hour differences in systolic and diastolic blood pressure indicated that only in the first hour after the exercises training the systolic pressure is lower than in the check course ($120 + 4$ mmHg versus $125 + 3$ mmHg, $p < 0.01$). Also in the second hour after the exercises the value is lower, the difference, however, is not statistically significant any more. In the other hours both profiles were not different. We have found no differences in diastolic pressure.

Conclusion: The analysis of 24-hour profile of systolic and diastolic blood pressure showed that the exercise training change systolic blood pressure only one hour immediately after the exercises.

PP.14.23 PREVALENCE OF ARTERIAL HYPERTENSION AND BLOOD PRESSURE CONTROL IN ELDERLY MEN RESIDING IN TALLINN, ESTONIA (2002–2003)

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Objectives: A random sample of the elderly male population of Tallinn aged 65–74 ($n = 244$) was examined to assess the prevalence of arterial hypertension (AH) and the current status of blood pressure control.

Methods: The screening procedure included systolic and diastolic blood pressure (SBP, DBP), height and weight measurements, determination total cholesterol (TC), triglycerides (TG), high- and low-density lipoproteins, and echocardiography. Left ventricular (LV) structure and function were evaluated with assessment of LV mass, relative wall thickness, ejection fraction, fractional shortening, and AE ratio.

Results: The survey showed high mean values of SBP and DBP (149.4 and 85.7 mm Hg) as well as extremely high prevalence of AH. 39.6% of hypertensives had isolated systolic hypertension (SBP ¡Ý 160 mm Hg). Only 28.7% of elderly men had optimal BP (< 140/90 mm Hg). Participants were divided in two groups according to values of pulse pressure (PP): Group1 with PP < 50 mm Hg and Group2 with PP ¡Ý65 mm Hg. Patients of Group2 had higher mean values of SBP, DBP, TC, TG, mean arterial pressure, total peripheral resistance, all three means of left ventricular mass (gr, gr/m and gr/BSA), posterior and relative wall thickness, and A/E ratio in compare to Group1 ($p < 0.01$).

The percentage of hypertensives unaware of elevated BP was 24.6%. 36.8% were aware but untreated. The proportion of treated uncontrolled hypertensives was 37%. Only 11.6% of treated hypertensives had BP under control.

Conclusion: Only 1/4 of the male population aged 65–74 have optimal BP. Involvement in and efficacy of treatment is the big problem of hypertension control in Estonia.

PP.14.24 HYPERTENSION AND DYSLIPIDEMIA IN ELDERLY AND VERY ELDERLY PATIENTS: DIFFERENCES IN 24 HOURS BLOOD PRESSURE PATTERNS AND TREATMENT

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Objective: To investigate epidemiological data regarding blood pressure and dyslipidemia among 3718 patients referred to our Center to perform ABPM.

Design and Method: Population was divided into adults (18–65 years of age), elderly (65–79 years of age), or very elderly (80 years or older). Exclusion criteria were: low- quality monitoring, unreliable data regarding drug therapy and severe comorbidity. Regarding anti-hypertensive therapy, Treatment Intensity Score (TIS) was calculated as previously reported.

Results: 2259 (60.8%) patients were hypertensive and 2060 (55.0%) were under anti-hypertensive treatment. SBP and PP increased significantly whereas DBP and MBP decreased significantly from young/adult to elderly to very elderly independently of normotensive/hypertensive status and treatment (all $p < 0.001$). Prevalence of dipper status decreased from 58.4% of adults to 44.8% of elderly to 38.9% of very elderly. Conversely, non dipper and risers prevalence increased with age ($p < 0.001$). Despite these findings, mean TIS was significantly lower in the very elderly group when compared to elderly and adult groups (1.08 ± 0.08 vs. 1.28 ± 0.03 and 1.17 ± 0.02 respectively, $p < 0.001$). In the subgroup in which data on lipid profile and statin therapy were available ($n = 885$), LDL levels decreased from young/adult to elderly to very elderly (135.18 ± 33.87 vs. 131.50 ± 33.96 and 109.76 ± 41.56 mg/dl respectively, $p < 0.001$), mainly because of higher prevalence of statin therapy (12.40% vs 44.55% and 50% respectively, $p < 0.001$). In a similar manner total cholesterol levels decreased from young/adult to elderly to very elderly, whereas HDL and tryglicerides did not differ significantly.

Conclusions: Elderly patients have higher SBP and PP compared to non-elderly subjects, independently to hypertensive status and anti-hypertensive treatments. Non dippers and risers are more frequent in the elderly or very elderly patients. Very elderly patients are often under-treated when ABPM values are taken into account maybe because of the physician's fear to cause harm. On the other side, statins are more prescribed in the highest categories of age and elderly and very elderly have lower total cholesterol and LDL compared to young/adults.

PP.14.25 THE SEE AND TREAT FOR THE MANAGEMENT OF ASYMPTOMATIC PRESSURE INCREASE

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The Tuscan Region approved an l model of "See and Treat" in First Aid in the field of health emergency which creates the basis for the reorganization of low priority codes care and which introduces nursing figures trained and