Design and method: A screening study that included 314 consecutive patients aged 35–74 years with normal in-office blood pressure (BP) in hypertension centre. Participants were performed to identify cardiovascular risk factors, underwent following 24-hours blood pressure monitoring to verify the MAH diagnosis, too. Patients with confirmed MAH were periodically clinically monitored for an average of 5.5 years (3.5–7 yrs).

Results: MAH was detected in the age category of 45–54 years, in 24.2 % and 9.9 % women, 55–64 years, in 19.4% men and 8.1 % women. Middle-aged and elderly men with MAH frequently identified CV RF compared to evenly aged women - family history of CV diseases, higher rate of smoking and dyslipidemia, lower physical activity prevailed. From a patients with the diagnosis of T2D, a total 44.3% presented normal in-office BP and the pts with the diagnosed MAH were older (63.9 vs. 54.7 years; p < 0.001), also with earlier diagnosis of T2D, higher rate of smokers (26.4 % vs. 1.9%; p = 0.002), and higher levels of HbA1c (10.7 % vs. 9.9%; p = 0.006), creatinine (0.73 vs. 0.65 mg/dl; p = 0.040), and microalbuminuria (139.4 vs. 27.4 mcg/mg; p < 0.001). Patients with MAH at the beginning of the study had long-term risk of progression to sustained office hypertension in 37.9 %, increased frequency of developing T2D 9.3 % and in the two oldest cohorts we observed a trend for a lower cognitive score on the MMSE.

Conclusions: MAH is common finding in patients especially in the age category of 45–54 and 55–64 years, in males, smokers ith unfavourable risk profile, and it is also common in diabetics. MAH is associated with progression to sustained office hypertension, increased frequency of developing T2D and in the oldest cohort, patients may show decreased cognitive function compared to patients with normotension.

REVERSE WHITE-COAT EFFECTS ACCORDING TO THE ACHIEVED BLOOD PRESSURES BELOW THE TARGET BLOOD PRESSURES FOR INTENSIVE BLOOD PRESSURE CONTROL

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Objective: In the application of nalysedd controlled trial data for intensive blood pressure (BP) control into clinical practice, the corresponding BPs among office, home, and ambulatory BPs were suggested to be similar if achieved clinic systolic BP (SBP) become 130 mmHg or lower. But the magnitude and its clinical implication of reversed white-coat effect (WCE) was not clearly reported.

Design and method: From the 1843 data of treated hypertension patients in Korean ambulatory blood pressure monitoring (Kor-ABP) registry, WCE were calculated according to the range of achieved clinic SBPs, < 120 mmHg (group1), 120~130 mmHg (group2), 130–140 mmHg (group3), and > = 140 mmHg (group4). The factors related to WCE were nalysed using multivariable regression analysis. WCE was defined by clinic SBP minus daytime ambulatory SBP.

Results: Mean age was 59 years and the proportion of female was 55%. Significant factors for the WCE were BMI (beta = -0.342), smoking (beta = -3.394), good sleep quality (beta = 0.872 per each 4 point likert scale), and clinic SBP(beta = 0.578). Mean SBPs for group 1 to 4 were 111.4 mmHg, 124.0 mmHg, 134.1 mmHg, and 157.5 mmHg, respectively. WCEs for the group were -8.3 mmHg for group1, -4.5 mmHg for group2, -1.9 mmHg for group3, and 9.9 mmHg for group4. The difference in WCEs between the group 4 and untreated hypertension patients (SBP, 155.6 +/-13.6) was not statistically significant (9.9 +/- 16.1 mmHg 9.0 +/-16.8, p = 0.2).

Conclusions: Reverse WCE should be considered to estimate the safety of intensive BP control when SBP lowered below 120 mmHg. The presence of reverse WCE instead of WCE highlights more reassuring aspect than previously thought when the patient is asymptomatic or tolerable.

ASSOCIATION BETWEEN NON-DIPPER OR NIGHT-TIME BLOOD PRESSURE PATTERN AND ALCOHOL DRINKING OR QUALITY OF SLEEP IN KOREAN REGISTRY OF AMBULATORY BLOOD PRESSURE MONITORING STUDY

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Objective: Non-dipper or reverse dipper is known to be associated with adverse cardiovascular prognosis in general population and clinical cohort. There are few large sized to explore the factor related to non-dipper or nighttime blood pressure pattern in terms of sleep quality and lifestyle factors.

Design and method: With the database of Korean multicenter nationwide prospective Registry of Ambulatory Blood Pressure monitoring (KORABP) study, 3745 patients referred for blood pressure evaluation was nalysed for clinical profiles including current smoking and alcohol drinking habits, sleep quality in 4 Likert scale as hardly sleep, poor sleep, not so bad, and very good with 1 to 4 points, and medical history.

Results: Age was 55.5+/-14.3 years and female was 45%. BMI was 24.7+/-3.4 kg/m2. 33.6% of the study population. Smoking and drinking habits 14.6% and 37.2%, respectively. Prevalence of diabetes mellitus, hypercholesterolemia, and cardiovascular diseases were 19.0%, 27.9% and 22.1%, respectively. Normotensive, untreated hypertension, and treated hypertension were 29.1%, 37.2% and 33.6%, respectively. Sleep qualities in hardly sleep, poor sleep, not so bad, and very good were 14.7%, 32.6%, 32.1% and 20.6%, respectively. In multivariable regression analyses for non-dipper or reverse dipper, age > 56 years, cardiovascular disease history, hypertension by ABPM, and poor sleep are positively associated factors whereas drinking and hypertension by clinic BP were negatively associated factors. Antihypertensive medication has no association. Sleep quality was negatively and positively associated with extreme dipper and reverse dipper, respectively.

Conclusions: Age, cardiovascular diseases, and hypertension by ABPM were associated with non-dipper. Drinking was associated with dipper. Good and poor sleep qualities were significant factors for extreme dipper and reverse dipper or non-dipper, respectively.

OFFICE BLOOD PRESSURE MEASUREMENT: MEAN OF TWO OR OF THREE VALUES?

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Objective: ESC/ESH 2018 hypertension guidelines recommend the calculation of the average of the last 2 blood pressure(BP) measurements(out of 3).This recommendation does not strictly correspond to previous recommendations of the ESC/ESH guidelines and to those of other international Societies.Furthermore, in several clinical trials mean BP values were calculated in different ways, more frequently by using the mean of three values(out of 3 measurements),or the mean of the last two (out of 2 or out of 3).
Aim of the study was to evaluate the effect of different methods for the calculation of the mean BP values on observed BP values and their relationship with hypertension mediated organ damage.

Design and method: In 206 patients BP was measured by a physician with an automated validated oscillometric device(3 measurements at 1 min intervals after 5 minutes of rest).Mean values were computed by using a)the first two measurements (SAP1/2 and DAP1/2)or b)the last two(SAP2/3 and DAP2/3)or c)three measurements (SAP1/2/3 and DAP1/2/3).All patients also underwent an echocardiogram.

Results: Mean age was 58 ± 15 years,57%F,BMI 27 ± 5,85% were hypertensives(78%treated).BP values were as follows:SAP1/2:135.5 ± 17.4; SAP1/2/3:134.0 ± 17.1;SAP2/3:132.4 ± 16.9 mmHg(ANOVA p < 0.01 for all comparisons);DAP1/2:77.4 ± 11.0;DAP1/2/3:77.0 ± 11.0;DAP2/3:76.7 ± 11.3(ANOVA p < 0.01 only for DAP1/2 vs DAP2/3).Left ventricular mass index(LVMI/h2.7) was correlated with all three means of SAP:(SAP1/2: r = 0.164, p < 0.05;SAP1/2/3:r = 0.168;SAP2/3:r = 0.185).Despite a trend for a better correlation between LVMI/h2.7 and SAP2/3,no difference between the correlation