

**6A.02: WHITE-COAT HYPERTENSION AS PREDICTOR OF LONG-TERM NORMOTENSION IN SUBJECTS SCREENED FOR STAGE 1 HYPERTENSION.**

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**OBJECTIVE:** For how long subjects with stage 1 hypertension should be followed with lifestyle measures before deciding whether antihypertensive treatment should be started is not well known. The aim of this study was to evaluate whether and to what extent a normal ambulatory (A) blood pressure (BP) can predict long-term normotension.

**DESIGN AND METHOD:** This investigation was conducted in 1114 subjects aged  $33 \pm 9$  years initially screened for stage 1 hypertension, who remained untreated for at least 3 months and had complete follow-up data for at least two years (range 2-20 years). Criteria for starting antihypertensive drug treatment were based on current available guidelines. At baseline, after 3 months, and at study end 24h ABP monitoring was performed.

**RESULTS:** After a mean follow-up of  $11 \pm 6$  years, BP fell to within normal values in 214 (19%) participants (Normotensives); the BP decline was  $-7 \pm 11 / -5 \pm 7$  mmHg after 1 year and was  $-14 \pm 11 / -8 \pm 7$  mmHg at follow-up end. White-coat hypertension was present at baseline in 35% of Normotensives and in 19% of the participants who met the criteria for treatment (Hypertensives) ( $p=0.000001$  versus Normotensives). After 3 months, the rate of participants with normal ABP was 42% in Normotensives and 22% in Hypertensives ( $p<0.000001$ ). The follow-up decline of heart rate was  $6 \pm 10$  bpm and  $2 \pm 11$  bpm, respectively, in the two groups ( $p=0.000006$ ). ABP after 11 years remained virtually unchanged in Normotensives ( $-1 \pm 9 / 1 \pm 8$  mmHg) and increased by  $4 \pm 12 / 3 \pm 9$  mmHg in Hypertensives ( $p<0.000001 / 0.002$ ). In a multivariable Cox regression, a normal ABP at baseline (Hazard ratio=0.76, 95%CI=0.64-0.90) or after 3 months (HR=0.69, 0.58-0.81) was a significant predictor of future normotension. However, an office BP decline  $>10$  mmHg after 1 year was an additional potent predictor of future normotension (HR=0.58, 0.47-0.72). Cardiovascular events occurred in 0.5% of the Normotensives and 5.5% of the Hypertensives ( $p=0.001$ ).

**CONCLUSIONS:** In low risk young-to-middle-age stage 1 hypertensives a long period of observation should be allowed before deciding whether to start drug treatment. A normal ABP, especially after 3 months, but also the office BP decline after 1 year are strong independent predictors of this favourable outcome.

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