

Ambulatory blood pressure and long-term risk for atrial fibrillation

Supplemental Material

SUPPLEMENTAL TABLE S1: Participation rate, enrollment and duration of follow-up.

Cohort	Participation Rate (%)	Enrollment	Follow-up (years)
FLEMENGHO, Noorderkempen, Belgium	78	1985-2007	17.9 (8.7–25.7)
EPOGH			
Pilsen, Czech Republic	82	2000–2001	14.1 (13.8–14.4)
Mirano (Venice), Italy	73	1999–2001	13.3 (12.6–14.5)
Gdansk, Poland	90	2008–2010	5.6 (4.7–6.7)
Niepolomice, Kraków, Poland	54	1999–2008	13.4 (6.1–14.3)
Novosibirsk, Russian Federation	68	1999–2000	8.8 (8.0–9.5)

Duration of follow-up time is presented as median (5th–95th percentile interval). FLEMENGHO, Flemish Study on Environment, Genes and Health Outcomes; EPOGH, the European Project on Genes in Hypertension.

SUPPLEMENTAL TABLE S2: Baseline characteristics of the study participants by cross-classification of conventional and ambulatory daytime blood pressures

Characteristics	Normotension (n=2452)	White-coat HT (n=219)	Masked HT (n=364)	Untreated Sustained HT (n=321)	Treated HT (n=600)
Incidence of AF					
Number of events	55	10	11	19	48
Incidence rate per 1000 person-years*	1.98 (1.44-2.53)	2.33 (0.88-3.77)	2.54 (0.87-4.21)	3.91 (1.78-6.03) ^N	3.38 (2.36-4.39) ^N
Clinical features					
Female, n (%)	1365 (55.7)	93 (42.5) ^N	129 (35.4) ^{N,W}	109 (34.0) ^N	354 (59.0) ^{W,M,S}
Age (yr)	38.8±13.7	47.4±15.1 ^N	42.0±14.1 ^{N,W}	49.4±13.7 ^{N,M}	56.6±12.3 ^{N,W,M,S}
Body mass index (kg/m ²)*	24.5±4.0	26.7±4.3 ^N	26.0±4.3 ^N	27.5±4.3 ^{N,W,M}	28.7±5.0 ^{N,W,M,S}
Daytime heart rate (bpm)	78.8±10.4	76.9±10.0 ^N	82.1±10.6 ^{N,W}	80.8±10.9 ^{N,W}	73.0±11.5 ^{N,W,M,S}
Conventional blood pressure (mm Hg) [§]					
Systolic	117.0±10.0	141.2±11.7 ^N	125.9±8.3 ^{N,W}	148.1±13.0 ^{N,W,M}	139.2±19.4 ^{N,M,S}
Diastolic	72.9±7.9	87.7±8.3 ^N	77.7±7.3 ^{N,W}	91.2±9.3 ^{N,W,M}	83.8±11.9 ^{N,W,M,S}
Mean	87.6±7.7	105.5±6.5 ^N	93.8±6.4 ^{N,W}	110.2±8.1 ^{N,W,M}	102.3±13.0 ^{N,W,M,S}
Pulse pressure	44.0±8.6	53.4±15.0 ^N	48.2±8.9 ^{N,W}	36.8±14.7 ^{N,W,M}	55.4±15.2 ^{N,M}
Daytime blood pressure (mm Hg)					
Systolic	119.7±7.6	125.9±6.2 ^N	136.2±6.2 ^{N,W}	142.6±9.8 ^{N,W,M}	131.0±13.5 ^{N,W,M,S}
Diastolic	74.1±5.6	77.6±5.3 ^N	85.8±5.9 ^{N,W}	88.8±7.5 ^{N,W,M}	80.1±9.3 ^{N,W,M,S}
Mean	88.8±5.6	93.5±4.6 ^N	101.8±4.6 ^{N,W}	106.3±7.2 ^{N,W,M}	97.4±10.0 ^{N,W,M,S}
Pulse pressure	45.6±6.2	48.3±6.4 ^N	50.4±8.9 ^{N,W}	53.8±9.7 ^{N,W,M}	50.9±9.6 ^{N,W,S}
Questionnaire data					
Tobacco use, n (%)	698 (28.5)	44 (20.1) ^N	136 (37.4) ^{N,W}	102 (31.8) ^M	113 (18.8) ^{N,M,S}
Alcohol intake ≥5 g/day, n (%)	638 (26.0)	66 (30.1)	135 (37.1) ^N	142 (44.2) ^{N,M}	127 (21.2) ^{N,W,M,S}
Diabetes mellitus, n (%)	23 (0.94)	4 (1.8)	11 (3.0) ^N	16 (5.0) ^N	70 (11.7) ^{N,W,M,S}
History of CV diseases, n (%)	93 (3.8)	18 (8.2) ^N	22 (6.0)	19 (5.9)	168 (28.0) ^{N,W,M,S}
Biochemical data					
Serum total cholesterol (mmol/liter)	5.16±1.10	5.53±1.12 ^N	5.49±1.13 ^N	5.69±1.07 ^{N,M}	5.73±1.09 ^{N,W,M}

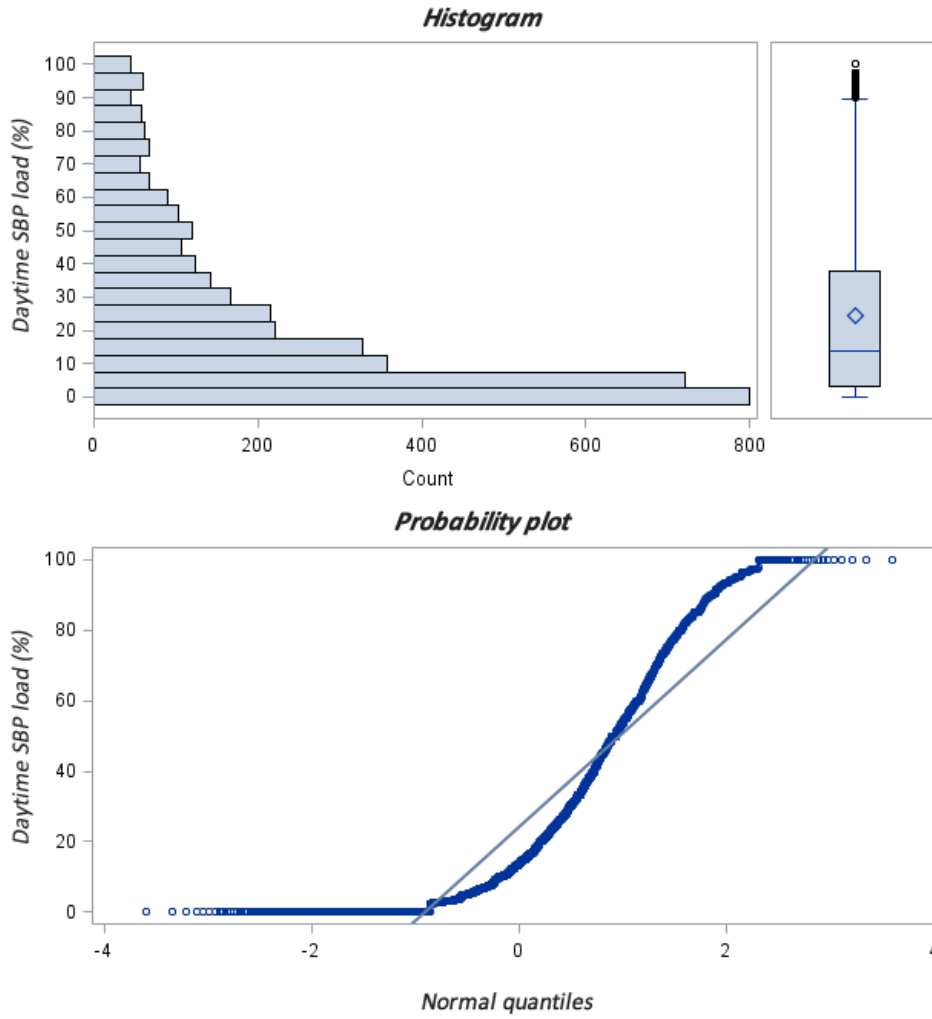
Values are arithmetic means ± SD or number of subjects (%). See methods for definition of hypertension groups using conventional and ambulatory thresholds. AF, atrial fibrillation; CV, cardiovascular. Incidence rates were standardized for sex and age by the direct method. § Average of 5 blood pressure readings obtained at one home visit. ^N*P*<0.05 vs normotension, ^W*P*<0.05 vs white-coat hypertension, ^M*P*<0.05 vs masked hypertension, ^S*P*<0.05 vs sustained hypertension.

SUPPLEMENTAL TABLE S3: Conventional and daytime ambulatory blood pressure in the prediction of atrial fibrillation in 3956 participants with available daytime ambulatory blood pressure monitoring

Blood pressure component	Conventional blood pressure		Daytime blood pressure	
	HRs (95% CI)	<i>P</i> value	HRs (95% CI)	<i>P</i> value
Systolic				
Mean± SD, mmHg	125.0±16.6		125.1±11.7	
Adjusted	1.18 (1.00 – 1.37)	0.039	1.25 (1.07 – 1.45)	0.0040
Diastolic				
Mean± SD, mmHg	77.3±10.8		77.4±8.2	
Adjusted	1.08 (0.91 – 1.29)	0.40	1.18 (1.00 – 1.38)	0.054
Pulse pressure				
Mean± SD, mmHg	47.7±12.0		47.7±7.9	
Adjusted	1.11 (0.95 – 1.31)	0.16	1.12 (0.96 – 1.31)	0.15

Hazard ratios (HRs) (95% confidence interval) are for the risk associated with 1-SD increases in systolic, diastolic and mean arterial pressure and pulse pressure. All hazard ratios were computed by Cox regression including cohort as a random effect and adjusted for sex, age, body mass index, serum cholesterol, tobacco and alcohol use, history of cardiovascular disease and diabetes mellitus, and antihypertensive drug treatment. Hazard ratios for pulse pressure were additionally adjusted for mean arterial pressure. CI, confidence interval; SD, standard deviation.

Supplemental Figure S1: Distribution and probability plot for the daytime systolic blood pressure load.



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