

Supplementary Materials

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Table S1. General characteristics of the study population analyzed by the stroke morbidity

Characteristics		Non-stroke (n=322)	Stroke (n=13)	P-value
Clinical features	Female [n (%)]	151 (46.9)	7 (53.80)	0.835
	Age (years %)	56.05	66.23	0.028*
	BMI (kg/m ² %)	24.52	24.89	0.707
Questionnaire	Tobacco use [n (%)]	42 (13.2)	3 (23.1)	0.397
	DM [n (%)]	39 (12.2)	2 (15.4)	0.667
	CVD Hx [n (%)]	74 (23.0)	10 (76.9)	<0.001*
	Known AF [n (%)]	14 (4.3)	3 (23.1)	0.002*
	HTN Hx [n (%)]	172 (53.4)	7 (53.8)	0.787
	Dyslipidemia Hx (%)	39 (12.1)	5 (38.5)	0.018*
Biochemical data	LDL (mg/dL)	97.72	91.50	0.611
	Total cholesterol (mg/dL)	169.48	154.85	0.296

General characteristics of the study population analyzed by the stroke morbidity.

BMI, body mass index; DM, diabetes mellitus; CVD Hx, cardiovascular disease history (ACS, HF & stroke); AF, atrial fibrillation; HTN Hx, hypertension history; Hx, history; LDL, low density lipoprotein.

*Statistical significance (P<0.05) of the difference between the two groups.

Table S2. General characteristics of the study population analyzed by the ACS morbidity

Characteristics		Non-ACS (n=323)	ACS (n=12)	P-value
Clinical features	Female [n (%)]	154 (47.7)	4 (33.3)	0.495
	Age (years %)	56.24	62.08	0.226
	BMI (kg/m ² %)	24.56±3.48	23.77±3.48	0.437
Questionnaire	Tobacco use [n (%)]	43 (13.4)	2 (16.7)	0.670
	DM [n (%)]	38 (11.9)	3 (25.0)	0.174
	CVD Hx [n (%)]	76 (23.5)	8 (66.7)	0.002*
	Known AF [n (%)]	15 (4.6)	2 (16.7)	0.062
	HTN Hx [n (%)]	172 (53.5)	9 (75.0)	0.234
	Dyslipidemia Hx (%)	42 (13)	2 (16.7)	0.662
Biochemical data	LDL (mg/dL)	97.82	85.62	0.411
	Total cholesterol (mg/dL)	168	165	0.810

General characteristics of the study population analyzed by the ACS morbidity.

BMI, body mass index; DM, diabetes mellitus; CVD Hx, cardiovascular disease history (ACS, HF & stroke); AF, atrial fibrillation; HTN Hx, hypertension history; Hx, history; LDL, low density lipoprotein.

*Statistical significance (P<0.05) of the difference between the two groups.

Table S3. General characteristics of the study population analyzed by the heart failure morbidity

Characteristics		Non-HF (n=329)	HF (n=6)	P-value
Clinical features	Female [n (%)]	157 (47.7)	1 (16.7)	0.219
	Age (years %)	56.40	58.67	0.739
	BMI (kg/m ² %)	24.54	24.46	0.956
Questionnaire	Tobacco use [n (%)]	44 (13.5)	1 (16.7)	0.586
	DM [n (%)]	40 (12.3)	1 (16.7)	0.549
	CVD Hx [n (%)]	79 (24.0)	5 (83.3)	0.004*
	Known AF [n (%)]	15 (4.6)	2 (33.3)	0.001*
	HTN Hx [n (%)]	177 (53.8)	4 (66.7)	0.691
	Dyslipidemia Hx (%)	44 (13.4)	0 (0.0)	1.000
Biochemical data	LDL (mg/dL)	97.29	106.5	0.658
	Total cholesterol (mg/dL)	168.76	170.60	0.934

General characteristics of the study population analyzed by the heart failure morbidity.

BMI, body mass index; DM, diabetes mellitus; CVD Hx, cardiovascular disease history (ACS, HF & stroke), AF, atrial fibrillation; HTN Hx, hypertension history; Hx, history; LDL, low density lipoprotein.

*Statistical significance (P<0.05) of the difference between the two groups.

Table S4. OR and 95% CI of the ACS incidence according to the parameters of the 24-hour AMBP in people without atrial fibrillation

Variable of 24 hr AMBP		Unadjusted		Adjusted*	
		OR (95% CI)	P-value	OR (95% CI)	P-value
24 hr BP	Mean sBP (mmHg)	0.983 (0.940–1.027)	0.439	0.977 (0.936–1.019)	0.284
	Mean dBP (mmHg)	0.974 (0.925–1.024)	0.302	0.969 (0.920–1.021)	0.241
Day BP	Mean sBP (mmHg)	0.977 (0.933–1.022)	0.309	0.970 (0.927–1.015)	0.195
	Mean dBP (mmHg)	0.947 (0.877–1.023)	0.166	0.942 (0.869–1.020)	0.143
	Systolic load (%)	0.995 (0.971–1.018)	0.654	0.994 (0.970–1.017)	0.588
	Diastolic load (%)	0.984 (0.953–1.015)	0.306	0.981 (0.949–1.014)	0.264
Night BP	Mean sBP (mmHg)	0.993 (0.955–1.033)	0.732	0.984 (0.947–1.023)	0.429
	Mean dBP (mmHg)	0.996 (0.945–1.051)	0.892	0.990 (0.945–1.038)	0.683
	Systolic load (%)	0.998 (0.982–1.015)	0.808	0.994 (0.974–1.014)	0.538
	Diastolic load (%)	1.001 (0.981–1.021)	0.935	0.996 (0.976–1.016)	0.682
	Dipper	0.420	0.226	0.496	0.345

(0.103–1.712)

(0.116–2.127)

OR and 95% CI of the ACS incidence according to the parameters of the 24-hour AMBP in people without atrial fibrillation.

The variables are presented as the OR (95% CI). The ORs and 95% CI were estimated by a multivariate logistic regression analysis.

OR, odds ratio; ACS, acute coronary syndrome; sBP, systolic blood pressure; dBP, diastolic blood pressure.

*The variables were adjusted for the sex, age, and known cardiovascular disease history.

Table S5. OR and 95% CI of the ACS incidence according to the parameters of the 24-hour Holter examination in people without atrial fibrillation

Variable of 24 hr Holter	Unadjusted		Adjusted [†]		
	OR (95% CI)	P-value	OR (95% CI)	P-value	
Arrhythmia	APC (%)	1.226 (1.017–1.478)	0.032 *	1.242 (0.995–1.550)	0.055
	PVC (%)	1.150 (1.007–1.314)	0.040 *	0.052 (0.999–1.319)	1.235
Time domain	Average HR (beat/m)	0.982 (0.921–1.046)	0.563	0.980 (0.919–1.045)	0.533
	Mean NN (ms)	1.002 (0.998–1.007)	0.338	1.002 (0.997–1.007)	0.358
	SDNN (ms)	0.993 (0.977–1.011)	0.454	0.999 (0.981–1.017)	0.941
	SDaNN (ms)	0.989 (0.971–1.009)	0.277	0.997 (0.978–1.017)	0.764
Heart rate variability	LF (ms)	0.999 (0.988–1.011)	0.900	1.000 (0.991–1.009)	0.976
	HF (ms)	0.999 (0.982–1.016)	0.895	1.000 (0.987–1.013)	0.997
	L/H (ms)	0.959 (0.206–4.472)	0.958	0.917 (0.193–4.363)	0.913

OR and 95% CI of the ACS incidence according to the parameters of the 24-hour Holter examination in people without atrial fibrillation.

The variables are presented as the OR (95% CI). The ORs and 95% CI were estimated by a multivariate

logistic regression analysis.

OR, odds ratio; APC, atrial premature complexes; PVC, premature ventricular contraction; HR, heart rate; SDNN, SD of all NN intervals; SDaNN, SD of the averages of the NN intervals; LF, low frequency; HF, high frequency; L/H, LF/HF.

*Statistical significance ($P < 0.05$) of the difference between the two groups.

†The variables were adjusted for the sex, age, and known cardiovascular disease history.

Table S6. OR and 95% CI of the heart failure incidence according to the parameters of the 24-hour AMBP in people without atrial fibrillation

Variable of 24 hr AMBP		Unadjusted		Adjusted*	
		OR (95% CI)	P-value	OR (95% CI)	P-value
24 hr BP	Mean sBP (mmHg)	1.053 (1.005–1.104)	0.031	1.049 (0.998–1.103)	0.057
	Mean dBP (mmHg)	1.064 (0.979–1.157)	0.141	1.059 (0.967–1.158)	0.215
Day BP	Mean sBP (mmHg)	1.054 (1.004–1.106)	0.034	1.052 (0.999–1.108)	0.054
	Mean dBP (mmHg)	1.056 (0.971–1.149)	0.203	1.049 (0.960–1.145)	0.291
	Systolic load (%)	1.030 (0.997–1.063)	0.750	1.028 (0.997–1.060)	0.079
	Diastolic load (%)	1.023 (0.992–1.055)	0.145	1.021 (0.988–1.055)	0.207
Night BP	Mean sBP (mmHg)	1.040 (0.997–1.085)	0.069	1.035 (0.989–1.084)	0.138
	Mean dBP (mmHg)	1.077 (0.991–1.169)	0.079	1.066 (0.969–1.173)	0.190
	Systolic load (%)	1.003 (0.996–1.009)	0.423	1.001 (0.994–1.008)	0.792
	Diastolic load (%)	1.012 (0.980–1.045)	0.471	1.005 (0.973–1.037)	0.768
	Dipper	0.860 (0.120–6.183)	0.881	1.200 (0.151–9.532)	0.863

OR and 95% CI of the heart failure incidence according to the parameters of the 24-hour AMBP in people without atrial fibrillation. The variables are presented as the OR (95% CI). The ORs and 95% CI were estimated by a multivariate logistic regression analysis.

OR, odds ratio; BP, blood pressure; sBP, systolic blood pressure; dBp, diastolic blood pressure.

*The variables were adjusted for the sex, age, known cardiovascular disease history, and known atrial fibrillation history.

Table S7. OR and 95% CI of the heart failure incidence according to the parameters of the 24 hour Holter examination in people without atrial fibrillation

Variable of 24 hr Holter		Unadjusted		Adjusted*	
		OR (95% CI)	P-value	OR (95% CI)	P-value
Arrhythmia	APC (%)	0.000	0.997	0.000	0.996
	PVC (%)	0.000	0.995	0.000	0.995
Time domain	Average HR (beat/m)	1.005 (0.917–1.102)	0.908	0.998 (0.909–1.096)	0.971
	Mean NN (ms)	1.000 (0.993–1.008)	0.905	1.001 (0.993–1.008)	0.855
	SDNN (ms)	1.009 (0.985–1.034)	0.461	1.014 (0.989–1.040)	0.282
	SDaNN (ms)	1.007 (0.981–1.033)	0.627	1.013 (0.985–1.041)	0.370
Heart rate variability	LF (ms)	1.000 (0.988–1.012)	0.971	1.040 (0.962–1.125)	0.323
	HF (ms)	0.999 (0.973–1.026)	0.934	1.000 (0.980–1.020)	0.999
	L/H (ms)	2.513 (0.301–20.955)	0.395	1.669 (0.190–14.645)	0.644

OR and 95% CI of the heart failure incidence according to the parameters of the 24-hour Holter examination in people without atrial fibrillation. The variables are presented as the OR (95% CI). The ORs and 95% CI were estimated by a multivariate logistic regression analysis.

OR, odds ratio; APC, atrial premature complexes; PVC, premature ventricular contraction; HR, hazard ratios; SDNN, SD of all NN intervals; SDaNN, SD of the averages of the NN intervals; LF, low frequency; HF, high frequency; L/H, LF/HF.

*The variables were adjusted for the sex, age, known cardiovascular disease history, and known atrial fibrillation history.

Table S8. OR and 95% CI of the cardiovascular disease incidence according to the parameters of the 24-hour AMBP in people without atrial fibrillation

Variable of 24 hr AMBP		Unadjusted		Adjusted [†]	
		OR (95% CI)	P-value	OR (95% CI)	P-value
24 hr BP	Mean sBP (mmHg)	1.019 (0.994–1.045)	0.139	1.005 (0.979–1.032)	0.689
	Mean dBP (mmHg)	1.003 (0.962–1.046)	0.879	1.002 (0.956–1.051)	0.080
Day BP	Mean sBP (mmHg)	1.016 (0.990–1.042)	0.233	1.003 (0.976–1.031)	0.806
	Mean dBP (mmHg)	0.988 (0.944–1.035)	0.613	0.990 (0.941–1.041)	0.695
	Systolic load (%)	1.006 (0.991–1.020)	0.458	1.002 (0.987–1.018)	0.779
	Diastolic load (%)	0.996 (0.978–1.014)	0.640	0.996 (0.977–1.016)	0.704
Night BP	Mean sBP (mmHg)	1.019 (0.996–1.042)	0.100	1.003 (0.979–1.028)	0.806
	Mean dBP (mmHg)	1.030 (0.989–1.072)	0.153	1.018 (0.975–1.062)	0.430
	Systolic load (%)	1.002 (0.997–1.007)	0.410	1.000 (0.994–1.006)	0.929
	Diastolic load (%)	1.010 (0.996–1.025)	0.169	1.004 (0.989–1.019)	0.595
	Dipper	0.346	0.034*	0.476	0.175

(0.129–0.924)

(0.162–1.394)

OR and 95% CI of the total cardiovascular disease incidence according to the parameters of the 24-hour AMBP in people without atrial fibrillation.

The variables are presented as the OR (95% CI). The ORs and 95% CI were estimated by a multivariate logistic regression analysis.

OR, odds ratio; BP, blood pressure; sBP, systolic blood pressure; dBP, diastolic blood pressure.

*Statistical significance ($P < 0.05$) of the difference between the two groups.

†The variables were adjusted for the sex, age, known cardiovascular disease history, and known atrial fibrillation history.

Table S9. OR and 95% CI of the cardiovascular disease incidence according to the parameters of the 24-hour Holter examination in people without atrial fibrillation

Variable of 24 hr Holter	Unadjusted		Adjusted*	
	OR (95% CI)	P-value	OR (95% CI)	P-value
Arrhythmia	APC (%)	1.139 (0.948–1.369)	1.168 (0.922–1.480)	0.163 0.197
	PVC (%)	1.089 (0.956–1.240)	1.089 (0.936–1.267)	0.200 0.269
Time domain	Average HR (beat/min)	0.995 (0.953–1.038)	0.999 (0.954–1.047)	0.809 0.979
	Mean NN (ms)	1.001 (0.998–1.005)	1.001 (0.997–1.004)	0.494 0.754
	SDNN (ms)	0.991 (0.979–1.003)	0.999 (0.985–1.013)	0.155 0.870
	SDaNN (ms)	0.988 (0.974–1.001)	0.998 (0.983–1.013)	0.074 0.755
Heart rate variability	LF (ms)	1.004 (0.995–1.013)	1.011 (0.962–1.063)	0.398 0.663
	HF (ms)	0.976 (0.901–1.057)	0.994 (0.927–1.065)	0.548 0.862
	L/H (ms)	1.295 (0.454–3.694)	1.623 (0.549–4.797)	0.628 0.381

OR and 95% CI of the total cardiovascular disease incidence according to the parameters of the 24-hour Holter examination in people without atrial fibrillation.

The variables are presented as the OR (95% CI). The ORs and 95% CI were estimated by a multivariate logistic regression analysis.

*The variables were adjusted for the sex, age, known cardiovascular disease history, and known atrial fibrillation history.

Table S10. HR and 95% CI of the incidence of the total cardiovascular disease according to the 24-hour AMBP parameters analyzed by a Cox proportional hazard model

24 hr AMBP parameter		Unadjusted		Adjusted [†]	
		HR (95% CI)	P-value	HR (95% CI)	P-value
24 hr AMBP	24 Mean sBP	1.016	0.207	1.006	0.612
		(0.991–1.041)		(0.983–1.30)	
	24 Mean dBP	1.003	0.882	1.014	0.537
		(0.961–1.047)		(0.971–1.059)	
	Day mean sBP	1.014	0.282	1.011	0.343
		(0.989–1.039)		(0.988–1.036)	
	Total Day mean dBP	0.993	0.993	1.004	0.869
		(0.950–1.037)		(0.960–1.050)	
	Night mean sBP	1.017	0.145	1.010	0.385
(0.994–1.040)		(0.988–1.032)			
Night mean dBP	1.029	0.165	1.021	0.322	
	(0.988–1.071)		(0.979–1.065)		
Dipper	0.379	0.047*	0.593	0.316	
		(0.146–0.987)		(0.213–1.647)	

HR and 95% CI of the incidence of the total cardiovascular disease according to the 24-hour AMBP parameters analyzed by a Cox proportional hazard model. The variables are presented as the HR (95% CI). The HRs and 95% CIs were estimated by a Cox-proportional hazard model.

HR, hazard ratios; sBP, systolic blood pressure; dBP, diastolic blood pressure.

*Statistical significance ($P < 0.05$) of the difference between the two groups.

[†]The variables were adjusted for the sex, age, known cardiovascular disease history, and known atrial fibrillation history.

Table S11. HR and 95% CI of the incidence of the cardiovascular diseases according to the 24-hour Holter examination parameters analyzed by a Cox proportional hazard model

Holter parameter	Unadjusted		Adjusted [†]	
	HR (95% CI)	P-value	HR (95% CI)	P-value
Stroke	APC	0.506 (0.008–30.748)	0.745	0.000 (0.000) 0.983
	PVC	0.686 (0.124–3.801)	0.666	0.000 (0.000) 0.964
	SDNN	0.973 (0.953–0.993)	0.009*	0.983 (0.961–1.006) 0.153
	SDaNN	0.966 (0.942–0.991)	0.008*	0.982 (0.957–1.007) 0.154
ACS	APC	1.247 (1.053–1.476)	0.011*	1.207 (1.013–1.439) 0.036*
	PVC	1.101 (0.991–1.224)	0.073*	1.088 (0.960–1.233) 0.187
	SDNN	0.986 (0.968–1.004)	0.121	0.997 (0.980–1.015) 0.737
	SDaNN	0.994 (0.975–1.013)	0.530	0.995 (0.976–1.014) 0.605
HF	APC	0.335 (0.000–884,381.388)	0.885	0.030 (0.000) 0.995
	PVC	0.631 (0.037–10.846)	0.751	0.000 (0.000) 0.967
	SDNN	1.007 (0.980–1.036)	0.603	1.009 (0.986–1.034) 0.437
	SDaNN	1.005 (0.977–1.034)	0.728	1.009 0.468

				(0.985–1.033)	
	APC	1.189 (1.007–1.405)	0.041*	1.158 (0.979–1.370)	0.087
	PVC	1.053 (0.943–1.176)	0.359	1.036 (0.913–1.176)	0.586
Total	SDNN	0.988 (0.975–1.000)	0.054	0.996 (0.984–1.008)	0.525
	SDaNN	0.984 (0.970–0.998)	0.027*	0.995 (0.982–1.009)	0.502

HR and 95% CI of the incidence of the cardiovascular diseases according to the 24-hour Holter examination parameters analyzed by a Cox proportional hazard model.

The variables are presented as the HR (95% CI). The HRs and 95% CIs were estimated by a Cox-proportional hazard model.

Significant baseline characteristics of HF: known cardiovascular disease history and known atrial fibrillation history.

Significant baseline characteristics of ACS: known cardiovascular disease history.

Significant baseline characteristics of a stroke: known cardiovascular disease history, known atrial fibrillation history, and dyslipidemia.

Significant baseline characteristics of the Total: known cardiovascular disease history and known atrial fibrillation history.

*Statistical significance ($P < 0.05$) of the difference between the two groups.

†The variables were adjusted for the sex, age, and significant baseline characteristics related to each disease.