

Association between autonomic dysfunction and arterial stiffness in hypertensive patients

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Supplementary material

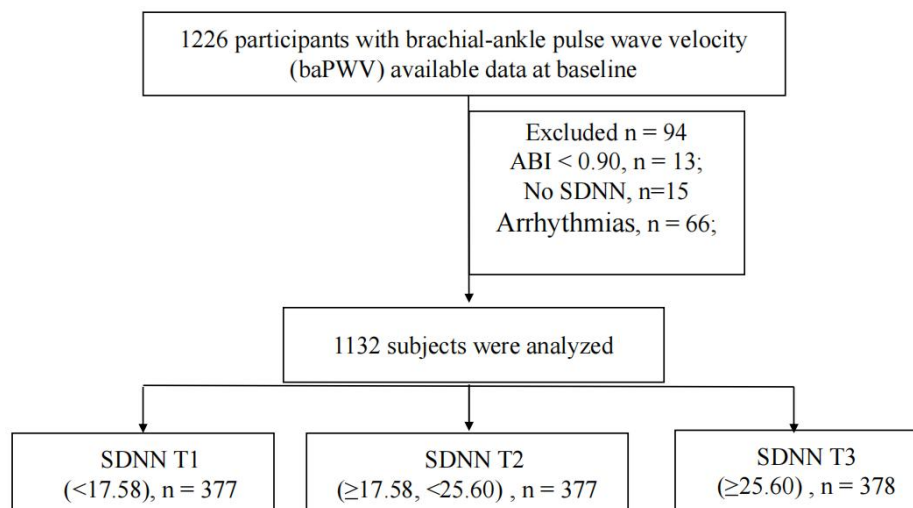


Figure S1 Flow chart of the study participants

**baPWV* brachial to ankle pulse wave velocity, *ABI* ankle-brachial index, *SDNN* Standard Deviation of Normal-to-Normal Intervals,

Variable	β (95%CI)	P value
gender	-13.51 (-46.23,19.21)	0.418
age	11.09 (10.27,11.92)	< 0.001
BMI	-8.17 (-12.49,-3.84)	< 0.001
SBP	-0.39 (-1.27,0.48)	0.376
DBP	-0.34 (-1.62,0.93)	0.596
Current smoking	-52.36 (-87.06,-17.67)	0.003
Current drinking	-13.26 (-47.13,20.61)	0.443
Antihypertensive drugs	7.55 (-28.49,43.59)	0.681
Self-reported diabetes	62.84 (-2.52,128.2)	0.059
Antidiabetes drugs	55.49 (-10.85,121.83)	0.101
Total cholesterol	-12.17 (-27.28,2.95)	0.115
Triglyceride	-2.9 (-14.09,8.29)	0.611
HDL-C	-3.81 (-61.54,53.92)	0.897
LDL-C	-21.65 (-41.86,-1.44)	0.036
FPG	39.34 (29.77,48.91)	< 0.001
HbA1c	79.25 (64.26,94.23)	< 0.001
SDNN	-5.61 (-7.01,-4.21)	< 0.001
rHR	0.09 (-1.18,1.35)	0.891
cSDNN	-369.39 (-500.89,-237.88)	< 0.001
pNN50	-41.6 (-52.55,-30.64)	< 0.001

Table S1. Univariate linear regression analysis between baPWV and baseline characteristics.

* *BMI* body mass index, *SBP* systolic blood pressure, *DBP* diastolic blood pressure, *HDL-C* high-density lipoprotein cholesterol, *LDL-C* low-density lipoprotein cholesterol, *FPG* Fasting plasma glucose, *HbA1c* hemoglobin A1c, *SDNN* Standard Deviation of Normal-to-Normal Intervals, *rHR* resting heart rate, *bpm* beats per minute, *cSDNN* corrected SDNN, *PNN50* the percentage of normal-to-normal intervals that differ by more than 50 ms.

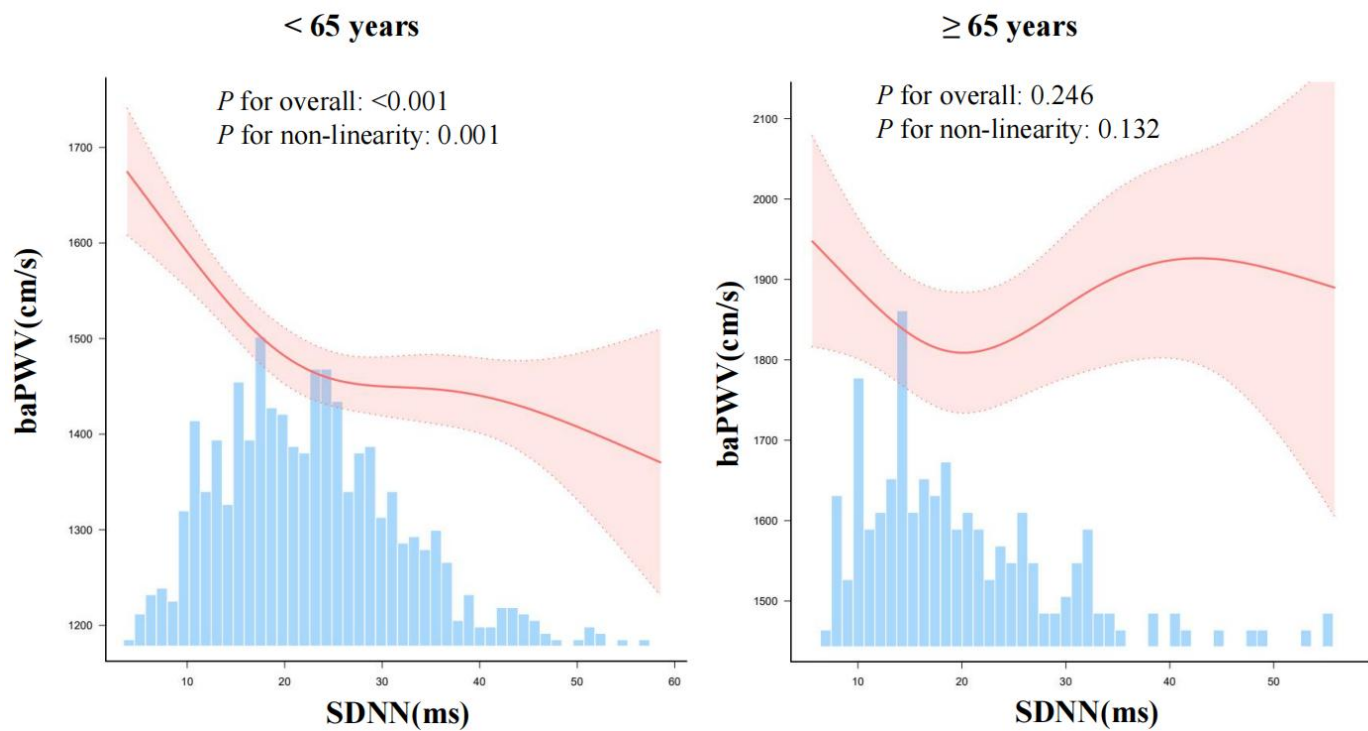


Figure S2 the relationship between SDNN and baPWV in different age

*Adjusted for age, gender, BMI, current smoking, current drinking, SBP, DBP, Total cholesterol, Triglyceride, HDL-C, LDL-C, FPG, HbA1c, self-reported diabetes, antihypertension drugs, antidiabetes drugs SDNN Standard Deviation of Normal-to-Normal Intervals, baPWV brachial to ankle pulse wave velocity, Only 99% of the data is displayed.

Variables	Total (n = 1132)	<65 years (n = 907)	≥65 years (n = 225)	p
gender, n (%)				< 0.001
female	369 (32.6)	265 (29.2)	104 (46.2)	
male	763 (67.4)	642 (70.8)	121 (53.8)	
Age, (years)	51.4 ± 14.6	46.1 ± 10.9	72.6 ± 6.0	< 0.001
BMI, (kg/m ²)	26.2 ± 3.5	26.5 ± 3.6	24.9 ± 3.0	< 0.001
SBP, (mmHg)	147.1 ± 17.6	147.5 ± 17.9	145.5 ± 16.4	0.127
DBP, (mmHg)	91.9 ± 12.0	92.0 ± 11.9	91.4 ± 12.5	0.509
Current smoking, n (%)				< 0.001
no	834 (73.7)	647 (71.3)	187 (83.1)	
yes	298 (26.3)	260 (28.7)	38 (16.9)	
Current drinking, n (%)				0.264
no	806 (71.2)	639 (70.5)	167 (74.2)	
yes	326 (28.8)	268 (29.5)	58 (25.8)	
Antihypertensive drugs, n (%)				0.339
no	269 (23.8)	221 (24.4)	48 (21.3)	
yes	863 (76.2)	686 (75.6)	177 (78.7)	
Self-reported diabetes, n (%)				0.012
no	1066 (94.2)	862 (95)	204 (90.7)	
yes	66 (5.8)	45 (5)	21 (9.3)	
Antidiabetes drugs, n (%)				0.019
no	1068 (94.3)	863 (95.1)	205 (91.1)	
yes	64 (5.7)	44 (4.9)	20 (8.9)	
Total cholesterol, (mmol/L)	4.7 ± 1.0	4.8 ± 1.0	4.3 ± 1.0	< 0.001
Triglyceride, (mmol/L)	1.6 (1.2, 2.3)	1.7 (1.2, 2.4)	1.4 (1.0, 1.9)	< 0.001
HDL-C, (mmol/L)	1.1 ± 0.3	1.1 ± 0.3	1.1 ± 0.2	0.845
LDL-C, (mmol/L)	2.6 ± 0.8	2.7 ± 0.7	2.3 ± 0.8	< 0.001
FPG, (mmol/L)	5.6 ± 1.6	5.6 ± 1.4	6.0 ± 2.0	< 0.001
HbA1c, (%)	5.8 ± 1.0	5.7 ± 0.9	6.2 ± 1.2	< 0.001
SDNN, (ms)	23.0 ± 10.7	23.6 ± 10.5	20.8 ± 11.2	< 0.001
rHR, (bpm)	73.2 ± 12.1	74.6 ± 12.0	67.5 ± 10.8	< 0.001
pNN50, (%)	0.1 (0.0, 0.2)	0.1 (0.0, 0.2)	0.0 (0.0, 0.1)	< 0.001
cSDNN, (%)	2.8 ± 1.4	2.9 ± 1.3	2.4 ± 1.5	< 0.001
ABI	1.1 ± 0.1	1.1 ± 0.1	1.1 ± 0.1	0.024
baPWV, (cm/s)	1533.1 ± 262.9	1466.5 ± 220.7	1801.8 ± 248.1	< 0.001

Table S2 Baseline characteristics of total and groups by different age.

* *BMI* body mass index, *SBP* systolic blood pressure, *DBP* diastolic blood pressure, *HDL-C* high-density lipoprotein cholesterol, *LDL-C* low-density lipoprotein cholesterol, *FPG* Fasting plasma glucose, *HbA1c* hemoglobin A1c, *SDNN* Standard Deviation of Normal-to-Normal Intervals, *rHR* resting heart rate, *bpm* beats per minute, *cSDNN* corrected SDNN, *PNN50* the percentage of normal-to-normal intervals that differ by more than 50 ms.

cSDNN	BaPWV, cm/s, β (95%CI)	Elevated baPWV, OR (95%CI)
Per 1 unit increase	-2.48 (-3.18~-1.79)	0.98 (0.97~0.99)
Tertiles		
T1 (<23.39)	0.00	1.00
T2 (23.39~37.41)	-88.36 (-118.84~-57.88)	0.42 (0.27~0.66)
T3 ($\geq$ 37.41)	-104.81 (-135.39~-74.24)	0.42 (0.27~0.65)
<i>P</i> for trend	<0.001	<0.001

Table S3 The relationships between cSDNN and baPWV, elevated baPWV.

*adjusted for age, gender, BMI, current smoking, current drinking, SBP, DBP, Total cholesterol, Triglyceride, HDL-C, LDL-C, FPG, HbA1c, self-reported diabetes, antihypertension drugs, antidiabetes drugs

SDNN Standard Deviation of Normal-to-Normal Intervals, baPWV brachial to ankle pulse wave velocity, CI confidence interval.