

SUPPLEMENTAL DATA

Table S1. Associations between markers of baseline and progression of cerebral small vessel disease and incident depressive symptoms – depressive symptoms defined by a GDS-15 score ≥ 6 (n=75)

Determinants	Change of GDS-15 score over time		
	β coefficient	95%CI	P-value
White matter hyperintensity volume (% ICV)			
- Per +1 SD volume at baseline	1.04	0.80; 1.35	.77
- Per +1 SD volume change over time	1.19	0.96; 1.47	.11
Subcortical infarcts			
- Baseline presence of any infarct(s) vs. no infarcts	1.62	0.74; 3.55	.23
- Any new infarct(s) over time vs. no new infarcts	1.43	0.53; 3.83	.50
Cerebral microbleeds			
- Baseline presence of any microbleed(s) vs. no microbleeds	1.24	0.66; 2.32	.50
- Any new microbleed(s) over time vs. no new microbleeds	1.98	1.11; 3.50	.02
Virchow-Robin spaces			
- Baseline presence of any space(s) vs. no spaces	1.40	0.76; 2.63	.27
- Any new space(s) over time vs. no new spaces	5.81	2.19; 15.41	<.001
Total brain parenchyma volume (% ICV)			
- Per -1 SD volume at baseline	1.10	0.84; 1.45	.49
- Per -1 SD volume change over time	1.13	0.84; 1.51	.42

All associations are adjusted for baseline age, sex, Digit Symbol Substitution Test score, Mini Mental State Examination score, education level, presence of anxiety symptoms, gait speed, alcohol use, smoking, diabetes, body mass index, hypertension, coronary calcium score, head coil, follow-up time and baseline 15-item geriatric depression scale (GDS-15) score. Abbreviations: CI: confidence interval; SD: standard deviation; ICV: intracranial volume.

Table S2. Associations between markers of baseline and progression over time of cerebral small vessel disease and incident depressive symptoms – individuals excluded with baseline stroke and(or) incident stroke during follow-up (n=152)

Determinants	Change of GDS-15 score over time		
	β coefficient	95%CI	P-value
White matter hyperintensity volume (% ICV)			
- Per +1 SD volume at baseline	1.07	0.91; 1.27	.42
- Per +1 SD volume change over time	1.18	1.01; 1.38	<.05
Subcortical infarcts			
- Baseline presence of any infarct(s) vs. no infarcts	1.98	1.14; 3.45	.02
- Any new infarct(s) over time vs. no new infarcts	2.04	0.97; 4.29	.06
Cerebral microbleeds			
- Baseline presence of any microbleed(s) vs. no microbleeds	1.18	0.76; 1.82	.46
- Any new microbleed(s) over time vs. no new microbleeds	1.22	0.80; 1.86	.36
Virchow-Robin spaces			
- Baseline presence of any space(s) vs. no spaces	0.97	0.61; 1.53	.88
- Any new space(s) over time vs. no new spaces	3.55	1.65; 7.67	.001
Total brain parenchyma volume (% ICV)			
- Per -1 SD volume at baseline	1.25	1.05; 1.50	.01
- Per -1 SD volume change over time	1.33	1.08; 1.64	.008

All associations are adjusted for baseline age, sex, Digit Symbol Substitution Test score, Mini Mental State Examination score, education level, presence of anxiety symptoms, gait speed, alcohol use, smoking, diabetes, body mass index, hypertension, coronary calcium score, head coil, follow-up time and baseline 15-item geriatric depression scale (GDS-15) score. Abbreviations: CI: confidence interval; SD: standard deviation; ICV: intracranial volume.

Table S3. Associations between presence of depressive symptoms at baseline (i.e. GDS-15 score of 6 or higher and/or use of antidepressant medication at baseline; n=325) and markers of progression over time of cerebral small vessel disease

Outcome variables	β coefficient	95%CI	P-value
+1 SD change of white matter hyperintensity volume over time (% ICV)	-0.01	-0.12; 0.12	.94
-1 SD change of total brain parenchyma volume over time (% ICV)	-0.06	-0.18; 0.06	.30
	Odds ratio	95%CI	P-value
Any incident subcortical infarct(s) vs. no incident infarcts	1.47	0.81; 2.66	.20
Any incident cerebral microbleed(s) vs. no incident microbleeds	1.37	0.99; 1.89	.05
Any incident Virchow-Robin space(s) vs. no incident spaces	1.67	0.82; 3.42	.16

All associations are adjusted for baseline age, sex, Digit Symbol Substitution Test score, Mini Mental State Examination score, education level, presence of anxiety symptoms, gait speed, alcohol use, smoking, diabetes, body mass index, hypertension, coronary calcium score, head coil, follow-up time and corresponding marker of baseline cerebral small vessel disease. Abbreviations: CI: confidence interval; SD: standard deviation; ICV: intracranial volume.