

Microinfarcts are common and strongly related to dementia in the oldest-old: The 90+ Study
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SUPPLEMENTARY MATERIAL

Participants Included and Not Included in Analyses

We compared characteristics of the 213 autopsied participants included in the current analyses to the 570 deceased participants of The 90+ Study who were not included in this study (564 did not agree to autopsy and 6 were excluded due to missing data) (Supplementary Table). Participants included in these analyses were slightly older (included=97.8 years vs. not included=97.0 years, $p=0.004$) and more likely to have a college degree (included=50% vs. not included=37%, $p=0.002$). There were trends towards significance in the percentage of women (included=69% vs. not included=75%, $p=0.07$), presence of APOE-e4 allele (included=23% vs. not included=16%, $p=0.07$), and history of diabetes (included=5% vs. not included=9%, $p=0.09$). There was no difference in marital status, Caucasian race, living situation, presence of APOE-e2 allele, proportion with dementia, or histories of hypertension, high cholesterol, heart disease, stroke, or TIA.

We also compared characteristics of the 188 autopsied participants who were originally part of the LWCS to the 25 who were not. They differed in the proportion of women (cohort=73% vs. not cohort=32%, $p<0.001$), but did not differ in average age at death, education, proportion with dementia, APOE-e4 allele, average number of microinfarcts, average number of macroinfarcts, proportion with tangle stage V-VI, or proportion with plaque score moderate-frequent.

SUPPLEMENTARY TABLE. Comparison of Participants Included in the Present Study with Deceased Participants who were not Included in the Study

Characteristic*	Included (N=213)	Not Included (N=570)	p-value§
	Mean (Range)		
Age at death (y)	97.8 (90 - 108)	97.0 (90 - 110)	0.004
	Number (%)		
Women	146 (69)	429 (75)	0.07
Colle graduate or more	106 (50)	212 (37)	0.002
Widowed	160 (75)	451 (80)	0.20
Caucasian	2 (1)	8 (1)	0.74
Sheltered living†	98 (46)	245 (43)	0.52
APOE e4 allele present	47 (23)	79 (16)	0.07
APOE e2 allele present	36 (17)	86 (18)	0.91
Dementia	110 (52)	308 (54)	0.43
Medical Histories			
Hypertension	120 (57)	331 (59)	0.57
High cholesterol	55 (27)	156 (29)	0.65
Diabetes	10 (5)	48 (9)	0.09
Heart disease‡	118 (56)	315 (56)	0.99
CAD	40 (19)	91 (16)	0.39
MI	27 (13)	83 (15)	0.56
HVD	18 (9)	49 (9)	0.99
CHF	42 (20)	127 (23)	0.49
Arrhythmia	74 (35)	160 (29)	0.09
CAB	11 (5)	42 (7)	0.34
Pacemaker	29 (14)	84 (15)	0.82
Stroke	34 (17)	93 (17)	0.99
TIA	66 (33)	147 (28)	0.14

Abbreviations: APOE=apolipoprotein, CAD=coronary artery disease, MI=myocardial infarction, HVD=heart valve disease, CHF=congestive heart failure, CAB= coronary artery bypass, TIA=transient ischemic attack

* Missing data in the included group: education (n=1), APOE (n=5), hypertension (n=2), cholesterol (n=9), diabetes (n=2), heart disease (n=2), CAD (n=4), MI (n=4), HVD (n=4), CHF (n=4), arrhythmia (n=5), CAB (n=4), pacemaker (n=6), stroke (n=7), TIA (n=15)

Missing data in the not included group: education (n=3), widowed (n=3), Caucasian (n=4), sheltered living (n=2), APOE (n=90), hypertension (n=12), cholesterol (n=29), diabetes (n=6), heart disease (n=8), CAD (n=16), MI (n=15), HVD (n=13), CHF (n=12), arrhythmia (n=23), CAB (n=7), pacemaker (n=13), stroke (n=12), TIA (n=37)

† Living in assisted living, board and care, or nursing home

‡ Heart disease includes a history of any of the following: coronary artery disease, myocardial infarction, heart valve disease, congestive heart failure, arrhythmia, coronary artery bypass, or pacemaker

§p-values are from t-test or Fisher's exact tests comparing the characteristics among people included vs not included in the present study.