

SUPPLEMENTAL MATERIAL

Prevalence of intracranial atherosclerotic disease in patients with low-risk transient or persistent neurological events

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Supplemental Table I. Baseline characteristics of patients with versus without ICAD

	ICAD (n=81)	No ICAD (n=580)	P value
Age, year	71 (63-79)	61 (53-69)	<0.001
Sex- Women	44 (54.3)	308 (53.1)	0.90
Diabetes mellitus	13 (16.0)	67 (11.5)	0.27
Hypertension	47 (58.0)	243 (41.9)	0.008
Hyperlipidemia	21 (25.9)	166 (28.6)	0.69
Atrial fibrillation	4 (4.9)	23 (3.9)	0.56
Current smoker	8 (9.8)	74 (12.7)	0.59
Ischemic heart disease	4 (4.9)	36 (6.2)	0.80
History of migraine	13 (16.0)	171 (29.5)	0.01
Treatment			
Aspirin treatment	22 (27.2)	188 (32.4)	0.38
Clopidogrel treatment	2 (2.5)	20 (3.4)	1.00
Statin treatment	19 (23.4)	140 (24.1)	1.00
Symptoms and signs on exam			
Ongoing symptoms on exam	30 (37.0)	209 (36.0)	0.90
Any motor symptom	7 (8.6)	71 (12.2)	0.46
Any sensory symptom	53 (65.4)	350 (60.3)	0.40
Any vision loss	11 (13.5)	71 (12.2)	0.72
Speech disturbance without weakness	5 (6.2)	85 (14.7)	0.04
Aphasia	3 (3.7)	40 (6.9)	0.34
Dysarthria	2 (2.5)	49 (8.4)	0.07
Any motor or speech symptoms	10 (12.3)	140 (24.1)	0.02
No prior identical symptomatic event	66 (81.5)	455 (78.4)	0.66
Abnormal initial neurological exam	29 (35.8)	135 (23.3)	0.02
Final diagnosis			<0.001
Stroke	18 (22.2)	46 (7.9)	
Probable or definite TIA	11 (13.6)	40 (6.9)	
Possible TIA	14 (17.3)	99 (17.1)	
Migraine	8 (9.9)	168 (28.9)	
Epileptic Seizure	1 (1.2)	5 (0.9)	
Anxiety	1 (1.2)	13 (2.2)	
Other	28 (34.6)	209 (36.0)	
Imaging findings			
DWI-positive ischemia	25 (30.8)	65 (11.2)	<0.001
Clinical outcomes			
90-day mRS =0-1	77/80 (96.2)	550/566 (97.1)	0.72
1-year mRS =0-1	72/75 (96.0)	521/531 (98.1)	0.21
Recurrent stroke or TIA or symptom progression	1/81 (1.2)	5/580 (0.8)	0.55
Death at 1 y	2/79 (2.5)	4/538 (0.7)	0.17

Values are expressed as median (interquartile range (IQR)) or n (%). ICAD: intracranial atherosclerotic disease. mRS: modified Rankin scale. TIA: transient ischemic attack

Supplemental Table II. Baseline characteristics of patients with versus without intracranial vascular imaging.

	Intracranial vascular imaging (n=661)	No intracranial vascular imaging (n=367)	P value
Age (median, IQR)	62 (53-70)	65 (55-73)	0.09
Sex- Women	352 (53.2)	170 (46.3)	0.04
Diabetes mellitus	80 (12.1)	60 (16.3)	0.07
Hypertension	290 (43.9)	190 (51.8)	0.02
Hyperlipidemia	187 (28.3)	155 (42.2)	<0.001
Atrial fibrillation	27 (4.1)	24 (6.5)	0.10
Current smoker	82 (12.4)	23 (6.3)	0.002
Ischemic heart disease	40 (6.1)	47 (12.8)	<0.001

IQR: interquartile range. Significant results are marked in bold.

Supplemental Table III. Baseline characteristics of patients who underwent intracranial vascular imaging using CTA versus MRA.

	CTA (n=332)	MRA alone (n=329)	P value
Age (median, IQR)	63 (54-71)	62 (53-70)	0.33
Sex- Women	167 (50.3)	185 (56.2)	0.14
Diabetes mellitus	45 (13.5)	35 (10.6)	0.28
Hypertension	153 (46.1)	137 (41.6)	0.27
Hyperlipidemia	105 (31.6)	82 (24.9)	0.06
Atrial fibrillation	18 (5.4)	9 (2.7)	0.12
Current smoker	39 (11.7)	43 (13.1)	0.64
Ischemic heart disease	22 (6.6)	18 (5.5)	0.62
Any ICAD	35 (10.5)	46 (14.0)	0.19

CTA: computed tomography angiography, ICAD: intracranial atherosclerotic disease, MRA: magnetic resonance angiography. IQR: interquartile range.

Supplemental Table VI. Baseline characteristics in patients with symptomatic ICAD versus asymptomatic ICAD.

	sICAD (n=16)	aICAD (n=65)	p-value
Age (median, IQR)	70 (62-73)	72 (65-79)	0.35
Sex- Women	6 (37.5)	38 (58.5)	0.17
Diabetes mellitus	3 (18.7)	10 (15.4)	0.71
Hypertension	8 (50.0)	39 (60.0)	0.57
Hyperlipidemia	5 (31.2)	16 (24.6)	0.75
Atrial fibrillation	0 (0)	4 (6.1)	0.58
Current smoker	2 (12.5)	6 (9.2)	0.65
Ischemic heart disease	1 (6.2)	3 (4.6)	0.99
History of migraine	5 (31.2)	8 (12.3)	0.12
Treatment			
Aspirin treatment	7 (43.7)	15 (23.1)	0.12
Clopidogrel treatment	1 (6.2)	1 (1.5)	0.36
Statin treatment	5 (31.2)	14 (21.5)	0.51
Symptoms and signs on exam			
Ongoing symptoms on exam	8 (50.0)	22 (33.8)	0.26
Any motor symptom	1 (6.2)	6 (9.2)	0.99
Any sensory symptom	10 (62.5)	43 (66.1)	0.77
Any vision loss	3 (18.7)	8 (12.3)	0.45
Speech disturbance without weakness	2 (12.5)	3 (4.6)	0.26
Aphasia	1 (6.2)	2 (3.1)	0.49
Dysarthria	1 (6.2)	1 (1.5)	0.36
Any motor or speech symptoms	2 (12.5)	8 (12.3)	0.99
No prior identical symptomatic event	14 (87.5)	52 (80.0)	0.72
Abnormal initial neurological exam	8 (50.0)	21 (32.3)	0.25
Final diagnosis			<0.001
Stroke	14 (87.5)	4 (6.1)	
Probable or definite TIA	2 (12.5)	9 (13.8)	
Possible TIA	0 (0.0)	14 (21.5)	
Migraine	0 (0.0)	8 (12.3)	
Epileptic Seizure	0 (5.6)	1 (1.5)	
Anxiety	0 (0.0)	1 (1.5)	
Other	0 (0.0)	28 (43.1)	
Clinical outcomes			
90-day mRS =0-1	14/15 (93.3)	63/65 (96.9)	0.47
1-year mRS =0-1	14/15 (93.3)	58/60 (96.7)	0.49
Recurrent stroke or TIA or symptom progression	0/16 (0)	1/65 (1.5)	0.99
Death at 1 y	0/16 (0)	2/63 (3.2)	0.99

Values are expressed as median (interquartile range (IQR)) or n (%). ICAD: intracranial atherosclerotic disease, aICAD: asymptomatic ICAD, sICAD: symptomatic ICAD. mRS: modified Rankin scale. TIA: transient ischemic attack

Supplemental Table V. Results of multivariable logistic for the prediction of any ICAD

	ICAD (n=81)	No ICAD (n=580)	adj OR (95% CI)
Age, y (median, IQR)	71 (63-79)	61 (53-69)	1.98 (1.56- 2.52) *
Sex (female)	44 (54.3)	308 (53.1)	1.05 (0.64-1.72)
Hypertension	47 (58.0)	243 (41.9)	1.28 (0.77- 2.13)
History of migraine	13 (16.0)	171 (29.5)	0.73 (0.38-1.41)
Speech disturbance without weakness	5 (6.2)	85 (14.7)	0.54 (0.14 2.07)
Any motor or speech symptoms	10 (12.3)	140 (24.1)	0.76 (0.28- 2.05)
Abnormal initial neurological exam	29 (35.8)	135 (23.3)	1.47 (0.87- 2.50)

Values are n (%). Abbreviations: adj OR: adjusted odds ratio. ICAD: intracranial atherosclerotic disease. IQR: interquartile range.

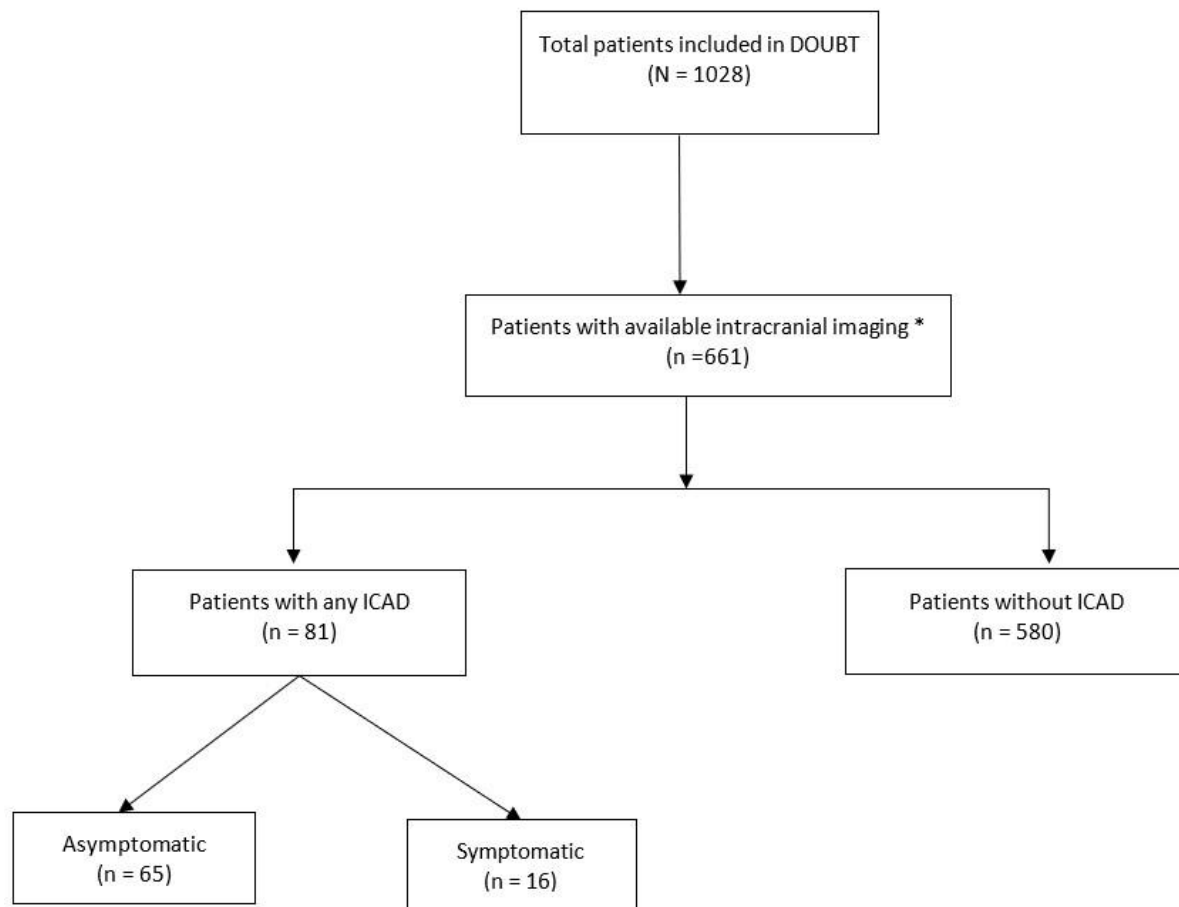
*per 10 years increase in age.

Supplemental Table VI. Baseline characteristics of patients with or without DWI lesions among those with intracranial vascular imaging.

Variable	DWI-positive ischemia (n=90)	No DWI-positive ischemia (n=571)	unadjusted OR (95% CI)
Age > 60 y	64 (71.1)	323 (56.6)	1.74 (1.13-2.67)
Age, y (median, IQR)	67 (58-73)	62 (53-70)	
Sex (female)	36 (40.0)	316 (55.3)	0.54 (0.34-0.84)
Hypertension	41 (45.6)	249 (44.6)	1.08 (0.69-1.69)
Diabetes mellitus	17 (18.9)	63 (11.0)	1.88 (1.04-3.38)
Dyslipidemia	24 (26.7)	163 (28.6)	0.91 (0.55-1.50)
Atrial fibrillation	2 (2.2)	25 (4.4)	0.50 (0.12-2.13)
Current Smoker	13 (14.4)	69 (12.1)	1.23 (0.64-2.32)
Ischemic Heart Disease	6 (6.7)	34 (5.9)	1.13 (0.46-2.76)
History of migraine	19 (21.1)	165 (28.9)	0.66 (0.38-1.12)
Treatment			
ASA treatment	31 (34.4)	179 (31.4)	1.15 (0.72-1.84)
Clopidogrel treatment	3 (3.3)	19 (3.3)	1.00 (0.29-3.45)
Statin treatment	20 (22.2)	139 (24.3)	0.89 (0.52-1.51)
Symptoms and signs on exam			
Ongoing symptoms on exam	41 (45.6)	198 (34.7)	1.57 (1.01-2.47)
Any motor symptom	15 (16.7)	63 (11.0)	1.62 (0.87-2.98)
Any sensory symptom	59 (65.6)	344 (60.2)	1.25 (0.79-2.00)
Any vision loss	8 (8.9)	74 (12.9)	0.65 (0.30-1.40)
Speech disturbance without weakness	15 (16.7)	75 (13.1)	1.32 (0.72-2.42)
Aphasia	8 (8.9)	35 (6.1)	1.49 (0.67-3.33)
Dysarthria	8 (8.9)	43 (7.5)	1.20 (0.54-2.64)
Any motor or speech symptoms	26 (28.9)	124 (21.7)	1.46 (0.89-2.40)
No prior identical symptomatic event	78 (86.7)	443 (77.6)	1.12 (1.00-1.22)
Abnormal initial neurological exam	33 (36.7)	131 (22.9)	1.94 (1.21-3.11)
Imaging findings			
ICAD	25 (27.8)	56 (9.8)	3.53 (2.07-6.05)
Extracranial stenosis $\geq$ 50% (n=335)	6/52 (11.5)	15/284 (5.3)	2.99 (0.91-6.67)
Clinical outcomes			
Recurrent stroke or TIA or symptom progression	4 (4.4)	2 (0.35)	13.23 (2.38-73.3)
Death at 1 y	4 (0.7)	2 (2.3)	3.09 (0.56-17.2)
90-day mRS =0-1	85 (96.6)	542 (97.1)	0.83 (0.23-2.93)
1-year mRS =0-1	80 (96.4)	513 (98.1)	0.72 (0.14-1.92)

Values are expressed as median (interquartile range (IQR)) or n (%). Significant results are marked in bold. ASA: acetylsalicylic acid. CI: confidence interval. DWI: diffusion-weighted imaging. ICAD: intracranial atherosclerotic disease. mRS: modified Rankin scale. OR: odds ratio. TIA: transient ischemic attack

Supplemental Figure I. Study Flowchart.



* Vascular imaging was performed as part of the institutions' routine clinical practice.