

SUPPLEMENTARY DATA

12-month outcome in patients with stroke and atrial fibrillation not suitable for oral anticoagulant strategy: the WATCH-AF registry

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Supplementary Study Flow Chart

Supplemental Table 1. Univariable association of death or dependency with demographic characteristics and risk factors in patients alive at discharge

	Death or dependency		p-value
	No (n=289)	Yes (n=80)	
Demographic characteristics			
Age, mean (SD), years	77.1 (11.5)	82.4 (8.9)	<0.001
Men	146 (50.5)	35 (43.8)	0.28
Medical history			
Hypertension	236 (81.7)	61 (76.3)	0.28
Diabetes	58 (20.1)	18 (22.5)	0.63
Dyslipidemia	120 (41.5)	38 (47.5)	0.34
Former smokers	94 (33.6)	17 (22.4)	0.06
Current smokers	27 (9.6)	4 (5.3)	0.36
Regular alcohol consumption	33 (11.5)	8 (10.0)	0.71
Regular physical activity	10 (3.6)		0.13
Cerebrovascular disease	61 (21.1)	23 (29.1)	0.13
Coronary artery disease	53 (18.3)	10 (12.7)	0.23
Peripheral artery disease	26 (9.0)	4 (5.1)	0.35
Congestive heart failure	34 (11.8)	15 (19.0)	0.09
Significant valvular disease or prosthetic heart valves	28 (9.7)	8 (10.1)	0.91
SCORE			
CHA ₂ DS ₂ –VASC baseline without qualifying event			0.006
0-1	29 (10.0)	0 (0)	
2-3	84 (29.1)	27 (34.2)	
4-5	124 (42.9)	33 (41.8)	
≥6	52 (18.0)	19 (24.1)	
STRATIFY at discharge (after stroke)			0.002
0 – low risk	201 (71.8)	41 (54.7)	
1 – moderate risk	61 (21.8)	20 (26.7)	
≥ 2 – high risk	18 (6.4)	14 (18.7)	
RANKIN at discharge			<0.001
0-1 – no disability	134 (46.9)	7 (8.8)	
2-3 – needing some help	110 (38.5)	22 (27.5)	
4-5 – dependent or bedridden	42 (14.7)	51 (63.8)	
NIHSS at baseline (in moment of stroke)			<0.001
0 –no neurological deficit	59 (20.6)	6 (7.6)	
1-4	99 (34.5)	10 (12.7)	
5-9	59 (20.6)	14 (17.7)	
10-20	54 (18.8)	32 (40.5)	
≥21 – most severe neurological deficit	16 (5.6)	17 (21.5)	
Examinations findings			
BMI, mean (SD), kg/m ²	25.8 (4.8)	25.1 (6.1)	0.30

Systolic BP, mean (SD), mm Hg	149.8 (26.2)	146.2 (24.7)	0.28
Diastolic BP, mean (SD), mm Hg	79.2 (15.5)	76.3 (15.1)	0.13
Glucose, median (IQR), mg/dl †	104.0 (93.0 - 129.0)	115.0 (98.0 - 136.0)	0.18
Hemoglobin A1C, median (IQR), % †	5.9 (5.6 - 6.5)	5.9 (5.5 - 6.6)	0.96
Creatinine, median (IQR), µmol/l †	84.0 (72.0 - 104.0)	89.0 (68.5 - 115.5)	0.53
Total cholesterol, mean (SD), mg/dl	174.6 (48.5)	162.1 (44.5)	0.033
LDL-cholesterol, mean (SD), mg/dl	102.4 (41.1)	87.8 (38.2)	0.45
HDL-cholesterol, mean (SD), mg/dl	50.3 (17.1)	50.8 (15.9)	0.83
Triglyceride, median (IQR), mg/dl †	95.0 (73.0 - 129.0)	104.5 (75.0 - 129.0)	0.88
CRP, median (IQR), mg/l	4.4 (3.0 - 12.5)	8.5 (3.0 - 37.3)	<0.001
Hemoglobin, mean (SD), g/l	13.7 (1.7)	12.7 (2.1)	<0.001
TCA ratio, median (IQR) †	0.9 (0.9 - 1.0)	1.0 (0.9 - 1.1)	0.34
ASCOD			
Atherothrombosis			0.013
A0 – no atherosclerosis	46 (16.8)	8 (11.1)	
A3 – atherosclerosis but not directly causal	134 (49.1)	29 (40.3)	
A2 – ipsilateral atherosclerosis <50%	62 (22.7)	19 (26.4)	
A1 – ipsilateral atherosclerosis >50%	30 (11.0)	12 (16.7)	
A9 – insufficient work-up to grade A	1 (0.4)	4 (5.6)	
Small vessel disease			0.049
S0 – no small vessel disease	218 (79.9)	47 (65.3)	
S3 – severe leukoaraiosis, old lacune, microbleed	36 (13.2)	15 (20.8)	
S1, S2 – small deep infarct w/wo old lacunes	6 (2.2)	3 (4.2)	
S9 – insufficient work-up to grade S	13 (4.8)	7 (9.7)	
Investigation findings			
<i>Brain imaging</i>			
Acute infarction			0.16
No	71 (24.6)	14 (17.5)	
Single infarct	181 (62.6)	50 (62.5)	
Multiple infarct	37 (12.8)	16 (20.0)	
Recent infarct (DWI) and old infarct (FLAIR) in another territory	21 (11.5)	7 (12.5)	0.83
Microbleed	38 (13.2)	8 (10.0)	0.44
Amyloid angiopathy (Boston Criteria)			0.011
No	286 (99.3)	75 (94.9)	
Possible	0 (0)	2 (2.5)	
Probable	2 (0.7)	2 (2.5)	
<i>Cardiac investigation</i>			
Premature ectopic beats	12 (4.2)	3 (3.8)	1
Left atrium area >20 cm ²	155 (71.1)	44 (80.0)	0.18
Pulmonary arterial pressure, median (IQR), mm Hg	35.0 (26.0 - 43.0)	36.0 (29.5 - 45.0)	0.14
Spontaneous echo contrast	45 (17.6)	7 (11.5)	0.24
Atrial thrombus	2 (0.8)	0 (0)	1
Ejection fraction <35%	9 (3.5)	4 (7.0)	0.26
Wall motion abnormality	27 (10.8)	8 (14.3)	0.45

Aortic valve abnormality	116 (43.8)	32 (51.6)	0.26
Mitral valve abnormality	175 (66.0)	45 (71.4)	0.41
Treatment			0.003
Long-term oral anticoagulant strategy	225 (77.9)	49 (61.3)	
Not on a long-term oral anticoagulant strategy	64 (22.1)	31 (38.8)	

Supplemental Table 2. Multivariable analysis of predictors of 12-month death or dependency

	HR (95% CI)	p-value
RANKIN at discharge		
0-1 – no disability	1. Ref	
2-3 – needing some help	2.78 (1.16 - 6.66)	0.021
4-5 – dependent or bedridden	13.86 (6.17 - 31.17)	<0.001
Hemoglobin, mean (SD), g/l	0.78 (0.68 - 0.89)	<0.001
ASCOD		
Small vessel disease		
S0 – no small vessel disease	1. Ref	
S3 – severe leukoaraiosis, old lacune, microbleed	1.52 (0.87 - 2.67)	0.142
S1, S2 small deep infarct with or without old lacunes	4.00 (1.20 - 13.36)	0.024
S9 – insufficient work-up to grade S	2.43 (1.12 - 5.28)	0.025
Treatment		
Long-term oral anticoagulant strategy	1. Ref	
Not on a long-term oral anticoagulant strategy	1.65 (1.05 - 2.61)	0.032
Age (per 10 years)	1.31 (1.02 - 1.68)	0.038
Total cholesterol, mean (SD), mg/dl	0.994 (0.989 – 0.999)	0.041

Supplemental Table 3. Univariable association of brain infarction or brain hemorrhage with demographic characteristics and risk factors in patients alive at discharge

	Brain infarction or brain hemorrhage		p-value
	No (n=318)	Yes (n=51)	
Demographic characteristics			
Age, mean (SD), years	78.0 (11.2)	79.7 (11.1)	0.30
Men	156 (49.1)	25 (49.0)	1
Medical history			
Hypertension	256 (80.5)	41 (80.4)	0.99
Diabetes	63 (19.8)	13 (25.5)	0.35
Dyslipidemia	136 (42.8)	22 (43.1)	0.96
Former smokers	98 (31.8)	13 (27.1)	0.51
Current smokers	27 (8.8)	4 (8.3)	1
Regular alcohol consumption	36 (11.4)	5 (9.8)	1
Regular physical activity	9 (3.0)	1 (2.0)	0.74
Cerebrovascular disease	69 (21.8)	15 (29.4)	0.28
Coronary artery disease	54 (17.0)	9 (17.6)	0.91
Peripheral artery disease	25 (7.9)	5 (9.8)	0.64
Congestive heart failure	41 (12.9)	8 (15.7)	0.59
Significant valvular disease or prosthetic heart valves	32 (10.1)	4 (7.8)	0.62
SCORE			
CHA ₂ DS ₂ –VASC baseline without qualifying event			0.12
0-1	28 (8.8)	1 (2.0)	
2-3	96 (30.3)	15 (29.4)	
4-5	137 (43.2)	20 (39.2)	
≥6	56 (17.7)	15 (29.4)	
STRATIFY at discharge (after stroke)			0.09
0 – low risk	215 (69.6)	27 (58.7)	
1 – moderate risk	70 (22.7)	11 (23.9)	
≥ 2 – high risk	24 (7.8)	8 (17.4)	
RANKIN at discharge			<0.001
0-1 – no disability	133 (42.2)	8 (15.7)	
2-3 – needing some help	117 (37.1)	15 (29.4)	
4-5 – dependent or bedridden	65 (20.6)	28 (54.9)	
NIHSS at baseline (in moment of stroke)			<0.001
0 – no neurological deficit	59 (18.7)	6 (12.0)	
1-4	101 (32.0)	8 (16.0)	
5-9	66 (20.9)	7 (14.0)	
10-20	63 (19.9)	23 (46.0)	
≥21 – most severe neurological deficit	27 (8.5)	6 (12.0)	
Examinations findings			
BMI. mean (SD). kg/m ²	25.6 (4.9)	26.1 (6.2)	0.63

Systolic BP. mean (SD). mm Hg	148.5 (25.9)	152.5 (26.1)	0.31
Diastolic BP. mean (SD). mm Hg	77.8 (14.9)	83.6 (18.1)	0.015
Glucose. median (IQR). mg/dl †	104.0 (93.0 - 129.0)	122.0 (102.0 - 147.0)	0.006
Hemoglobin A1C. median (IQR). % †	5.9 (5.6 - 6.4)	6.0 (5.8 - 7.3)	0.051
Creatinine. median (IQR). µmol/l †	86.0 (71.0 - 105.0)	83.0 (68.0 - 112.0)	0.18
Total cholesterol. mean (SD). mg/dl	172.0 (48.7)	171.2 (42.6)	0.92
LDL-cholesterol. mean (SD). mg/dl	99.8 (41.2)	96.0 (38.5)	0.56
HDL-cholesterol. mean (SD). mg/dl	50.0 (16.5)	53.3 (18.8)	0.21
Triglyceride. median (IQR). mg/dl †	97.0 (74.0 - 135.0)	96.5 (75.5 - 120.5)	0.56
CRP. median (IQR). mg/l	5.0 (3.0 - 14.0)	6.2 (3.0 - 31.8)	0.002
Hemoglobin. mean (SD). g/l	13.5 (1.8)	13.2 (1.9)	0.23
TCA ratio. median (IQR) †	0.9 (0.9 - 1.0)	1.0 (0.9 - 1.1)	0.09
ASCOD			
Atherothrombosis			0.007
A0 – no atherosclerosis	45 (15.1)	9 (19.6)	
A3 – atherosclerosis but not directly causal	142 (47.5)	21 (45.7)	
A2 – ipsilateral atherosclerosis <50%	73 (24.4)	8 (17.4)	
A1 – ipsilateral atherosclerosis >50%	38 (12.7)	4 (8.7)	
A9 – insufficient work-up to grade A	1 (0.3)	4 (8.7)	
Small vessel disease			0.062
S0 – no small vessel disease	236 (78.9)	29 (63.0)	
S3 – severe leukoaraiosis, old lacune, microbleed	40 (13.4)	11 (23.9)	
S1, S2 – small deep infarct w/wo old lacunes	8 (2.7)	1 (2.2)	
S9 – insufficient work-up to grade S	15 (5.0)	5 (10.9)	
Investigation findings			
<i>Brain imaging</i>			
Acute infarction			0.47
No	71 (22.3)	14 (27.5)	
Single infarct	203 (63.8)	28 (54.9)	
Multiple infarct	44 (13.8)	9 (17.6)	
Recent infarct (DWI) and old infarct (FLAIR) in another territory	24 (12.0)	4 (10.3)	1
Microbleed	41 (12.9)	5 (9.8)	0.53
Amyloid angiopathy (Boston Criteria)			0.20
No	312 (98.7)	49 (96.1)	
Possible	3 (0.9)	1 (2.0)	
Probable	1 (0.3)	1 (2.0)	
<i>Cardiac investigations</i>			
Premature ectopic beats	12 (3.8)	3 (5.9)	0.45
Left atrium area >20 cm ²	170 (72.0)	29 (78.4)	0.42
Pulmonary arterial pressure. median (IQR). mm Hg	34.5 (26.0 - 43.0)	36.0 (30.0 - 45.0)	0.52
Spontaneous echo contrast	43 (15.6)	9 (22.0)	0.31

Atrial thrombus	1 (0.4)	1 (2.6)	0.23
Ejection fraction <35%	10 (3.6)	3 (7.7)	0.21
Wall motion abnormality	30 (11.2)	5 (12.5)	0.81
Aortic valve abnormality	123 (43.2)	25 (59.5)	0.047
Mitral valve abnormality	189 (66.1)	31 (73.8)	0.32
Treatment			<0.001
Long-term oral anticoagulant strategy	248 (78.0)	26 (51.0)	
Not on a long-term oral anticoagulant strategy	70 (22.0)	25 (49.0)	

Supplemental Table 4. Multivariable analysis of predictors of 12-month brain infarction or brain hemorrhage

	HR (95% CI)	p-value
RANKIN at discharge		
0-1 – no disability	1. Ref	
2-3 – needing some help	2.28 (0.94 - 5.52)	0.067
4-5 – dependent or bedridden	5.35 (2.37 - 12.1)	<0.001
Treatment		
Long-term oral anticoagulant strategy	1. Ref	
Not on a long-term oral anticoagulant strategy	2.46 (1.36 - 4.44)	0.003
Glucose. median (IQR). mg/dl	1.80 (1.16 - 2.79)	0.009
Diastolic BP. mean (SD). mm Hg	1.02 (1.01 - 1.04)	0.014
Hemoglobin A1C. median (IQR), %	1.30 (1.05 - 1.62)	0.015
Aortic valve abnormal	2.11 (1.11 - 4.00)	0.024
CRP. median (IQR), mg/l	1.01 (1.00 - 1.01)	0.047
Atherothrombosis		
A0 – no atherosclerosis	1. Ref	
A3 – atherosclerosis but not directly causal	0.46 (0.18 - 1.16)	0.103
A2 – ipsilateral atherosclerosis <50%	0.51 (0.20 - 1.32)	0.168
A1 – ipsilateral atherosclerosis >50%	0.33 (0.08 - 1.32)	0.12
A9 – insufficient work-up to grade A	3.14 (0.84 - 11.74)	0.09

Supplementary Study Flow Chart

