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CÉRÉBRALE

12-MONTH BLEEDING RISK IN PATIENTS WITH STROKE AND ATRIAL FIBRILLATION NOT DISCHARGED ON ANTICOAGULANT THE WATCH-AF REGISTRY*

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BACKGROUND

In patients with acute stroke associated with atrial fibrillation (AF) many cannot be discharged on long-term oral anticoagulant (LTOAC). Their bleeding risk compared to those on LTOAC is not well known.

METHODS

Consecutive patients admitted within 24 hours of symptom onset of an acute stroke associated with AF in two stroke centers had systematic CHADSVASC, HASBLED, NIHSS, mRS, Barthel, IADL, MMS, STRATIFY scores collected at admission, discharge, 2 and 8 days, 3, 12 months post stroke. We evaluated the hemorrhagic stroke and major bleeding (MB, according to ISTH) incidence.

RESULTS

Among 400 patients (369 brain infarction, 29 brain hemorrhage, 2 both), 131 patients were not discharged on LTOAC (too frail-bedridden or demented, patient refusal, temporary or definitive contra-indication to LTOAC)
At 12 months brain hemorrhage occurred in 11.0% patients not discharge on LTOAC as compared to 3.1% in 239 patients discharged on LTOAC (p=0.002). Major bleeding occurred in 0.9% of patients discharged on LTOAC, as compared to 8.8% in patients not discharge on LTOAC (p<0.001).The risk of major bleeding is 9-fold higher in patients not LTOAC as compared to patients on LTOAC (HR=9.00 [95%CI 1.97-40.88] p=0.005). (Table 1 and 2, Figures 1 and 2)

CONCLUSIONS

Patients not discharged on LTOAC had an unexpectedly high increase risk in brain hemorrhage and major bleeding at 12 months as compared to that of patients discharged on LTOAC. Alternative preventive treatments in patients not discharged on anticoagulant are needed.

Table 1. Univariate association of brain hemorrhage with demographic characteristics and risk factors

	12-month brain hemorrhage		P-value
	No (n=349)	Yes (n=21)	
Age, mean (SD), years	78 ± 11	77 ± 13	0.67
Men	168 (48.1)	13 (61.9)	0.22
Medical history			
Hypertension	283 (81.1)	15 (71.4)	0.28
Diabetes	71 (20.3)	5 (23.8)	0.78
Dyslipidemia	152 (43.6)	6 (28.6)	0.18
Former smokers	104 (30.9)	7 (35.0)	0.70
Current smokers	29 (8.6)	2 (10.0)	0.69
Cerebrovascular disease	81 (23.3)	3 (14.3)	0.43
Coronary artery disease	61 (17.5)	2 (9.5)	0.55
Congestive heart failure	48 (13.8)	1 (4.8)	0.33
SCORE			
CHA ₂ D ₂ S –VASC score, median (IQR)			0.8
2-3	68 (19.5)	4 (19.1)	
4-5	159 (45.7)	11 (52.4)	
≥6	121 (34.8)	6 (28.6)	
STRATIFY score, median (IQR)			0.85
0 – low risk	231 (68.3)	11 (64.7)	
1 – moderate risk	77 (22.8)	4 (23.5)	
≥ 2 – high risk	30 (8.9)	2 (11.8)	
RANKIN score, median (IQR)			<0.001
0-1	138 (39.9)	3 (15.0)	
2-3	128 (37.0)	4 (20.0)	
4-5	80 (23.1)	13 (65.0)	
NIHSS score, median (IQR)			<0.001
0	107 (30.7)	2 (10.5)	
1-4	137 (39.3)	4 (21.1)	
5-9	51 (14.6)	2 (10.5)	
10-20	42 (12.0)	9 (47.4)	
≥21	12 (3.4)	2 (10.5)	
Examinations findings			
BMI, mean (SD), kg/m²	25.7 ± 5.0	25.4 ± 6.0	0.79
Systolic BP, mean (SD), mm Hg	149 ± 26	148 ± 23	0.90
Diastolic BP, mean (SD), mm Hg	78 ± 15	87 ± 22	0.09
Glucose, median (IQR), mg/dl †	105 (93-129)	146 (115-200)	<0.001
Treatment			0.002
Not LTOAC	117 (33.5)	14 (66.7)	
On LTOAC	232 (66.5)	7 (33.3)	

Table 2. Multivariable analysis of predictors of 12-months brain hemorrhage

	HR (95% CI)	p-value
NIHSS		
0	1 (ref.)	
1-4	1.90 (0.76-4.70)	0.17
5-9	155 (0.39-6.23)	0.55
10-20	3.47 (1.19-10.05)	0.028
≥21	8.02 (1.79-36.01)	0.009
Rankin		
0-1	1 (ref.)	
2-3	1.29 (0.28-5.88)	0.75
4-5	5.21 (1.45-18.72)	0.012
Diastolic BP	1.02 (1.00-1.05)	0.036
Glucose	1.80 (1.02-3.15)	0.041
On LTOAC	1 (ref.)	
Not on LTOAC	2.69 (1.04-6.96)	0.042

Figure 1. Cumulative event rate of 12-months risk of brain hemorrhage according to LTOAC

Figure 1 is a Kaplan-Meier survival plot showing the cumulative event rate of 12-months risk of brain hemorrhage according to LTOAC status. The y-axis represents the event rate in percentage (0 to 100), and the x-axis represents time in months (0 to 12). Two curves are shown: one for patients without LTOAC (n=131) and one for patients with LTOAC (n=239). The curve for patients without LTOAC shows a significantly higher event rate compared to the curve for patients with LTOAC. The p-value is 0.002 by log-rank test.

Figure 2. Cumulative event rate of 12-months risk of major bleeding according to LTOAC

Figure 2 is a Kaplan-Meier survival plot showing the cumulative event rate of 12-months risk of major bleeding according to LTOAC status. The y-axis represents the event rate in percentage (0 to 100), and the x-axis represents time in months (0 to 12). Two curves are shown: one for patients without LTOAC (n=131) and one for patients with LTOAC (n=239). The curve for patients without LTOAC shows a significantly higher event rate compared to the curve for patients with LTOAC. The p-value is <0.001 by Log-rank test.

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