Supplemental Data

Variables of blood pressure (BP): (1) systolic and diastolic BP at admission; (2) mean systolic and diastolic BP of 24-h ambulatory BP monitoring (ABPM) 7±3 days within admission; (3) inadequate BP control, defined as mean systolic BP <140 mm Hg and mean diastolic BP <90 mm Hg for individuals without diabetes or mean systolic BP <130 mm Hg and mean diastolic BP <80 mm Hg for individuals with diabetes; and (4) antihypertensive agent used after ischemic stroke onset.

Statin therapy before and after stroke onset was recorded. Prior statin treatment was defined as any dose or type of statin therapy before stroke onset. Present intensive statin treatment was defined as rosuvastatin (20 mg/day) or atorvastatin (40 mg/day) after stroke onset.[13]

Anterior or/and posterior circulation: According to the vascular territory involved, we divided the infarction distribution into (1) anterior circulation; (2) posterior circulation; and (3) both anterior and posterior circulation.

T**he location of the infarction** was divided into (1) superficial lesions, defined as lesions of gray matter or subcortical white matter of the frontal lobe, parietal lobe, temporal lobe, limbic lobe, or cerebellar hemispheres; (2) deep lesions, defined as lesions of the internal capsule, corona radiate, centrum semiovale, caudate nucleus, globus pallidus, putamen, mesencephalon, thalamus, pons, or cerebellar vermis; or (3) mixed lesions, defined as

multiple lesions involved both superficial and deep lesions at the same time.[14]

Table 1. Hemorrhagic events of patients

Hemorrhage event type	***n* (%)**
Hemorrhagic transformation	31 (3.6)
HI	25 (2.9)
PH	6 (0.7)
sICH	1 (0.1)
Gastrointestinal hemorrhage	19 (2.2)
Urethral hemorrhage	7 (0.8)
Mouth hemorrhage	3 (0.3)
Nose hemorrhage	1 (0.1)
Fatal hemorrhagic events	0 (0.0)
Time after onset (days)	14 [10–18.5]
All patients	*n*=859

HI: hemorrhagic infarction; PH: parenchymal hematoma; sICH: symptomatic intracranial hemorrhage.

Table 2. Association between infarction locations and hemorrhagic events

		Univariate		Multivariate	
		OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
Hemorrhage event	Superficial lesions	Reference		Reference	
	Deep lesions	0.85 (0.39–1.84)	0.677	0.58 (0.24–1.38)	0.219
	Mix lesions	1.16 (0.72–3.67)	0.238	0.81 (0.30–2.15)	0.672

Abbreviations: CI, confidence interval; OR, odds ratio. Variables including D-dimer, fibrinogen, NIHSS, ADP inhibition rate, and infarction location were entered into the multivariate logistic regression model.

Table 3. Association between blood pressure and hemorrhagic events

Characteristics	Non-hemorrhage (*n*=798)	Hemorrhage (*n*=61)	*p*-value
SBP at admission, mean [IQR]	145 [134–165]	145 [131–163]	0.555
DBP at admission, mean [IQR]	84 [78–93]	85 [76–100]	0.466
Mean SBP, mean [IQR]	143 [130–152]	137 [125–151]	0.350
Mean DBP, mean [IQR]	85 [79–92]	86 [76–91]	0.852
Inadequate BP control, *n* (%)	483(60.5)	32 (52.1)	0.434
Antihypertensive Agent Use After Index AIS, *n* (%)			
Any agent used, *n* (%)	543 (68.0)	35.0 (57.4)	0.251
Number of agents, *n* (%)			0.740
None	303 (38.0)	29 (47.5)	
1	303 (38.0)	18 (29.5)	
2	128 (16.0)	10 (16.4)	
≥3	64 (8.0)	4 (6.6)	
Drug class, *n* (%)			
β-blocker	64 (8.0)	7 (11.5)	0.542
ACE inhibitor	16 (2.0)	2 (3.3)	0.679
ARB	176 (22.0)	8 (13.1)	0.216
Calcium channel blocker	463 (58.0)	33 (54.1)	0.680
Diuretic	32 (4.0)	2 (3.3)	0.839

Other	64 (8.0)	7 (11.5)	0.542

Categorical variables are presented as *n* (%), and continuous variables are presented as the median [interquartile range]; p <0.05 was considered statistically significant. Abbreviations: BP, blood pressure; SBP, systolic blood pressure; DBP, diastolic blood pressure; IQR, interquartile range; AIS, acute ischemic stroke; ACE, angiotensin-converting enzyme; ARB, angiotensin receptor blocker.

Table 4. Analysis of the hematological data

	Non-hemorrhage (*n*=798)	**Hemorrhage (*n*=61)**	***p*-value**
Biochemical indexes			
Hcy (mmol/L)	13.2 [10.7–16.6]	12.6 [9.5–16.5]	0.268
TG (mmol/L)	3.5 [2.8–4.2]	3.6 [2.9–4.3]	0.639
TC (mmol/L)	1.2 [1.0–1.8]	1.2 [0.9–1.7]	0.487
HDL (mmol/L)	0.9 [0.8–1.1]	1.0 [0.7–1.1]	0.700
LDL-C (mmol/L)	2.1 [1.5–2.7]	2.2 [1.7–2.7]	0.400
ALT (mmol/L)	17 [12.0–28.0]	17.0 [13.0–21.0]	0.511
AST (mmol/L)	19.0 [16.0–26.0]	19.0 [17.0–25.0]	0.922
BUN (mmol/L)	4.7 [3.8–5.7)	4.5 [3.4–5.3]	0.098
Cr (umol/L)	72.0 [62.0–84.0]	70.0 [60.0–83.0]	0.366
eGFR (ml/min/1.73 m^2)	94.9 [83.0–103.4]	98.8 [86.6–107.0]	0.074
Platelet indexes			
PLT ($\times 10^9$/L)	211 [177–254]	222 [183–253]	0.482
PDW (fL)	13.3 [11.9–15.2]	12.9 [11.3–14.4]	0.120
MPV (L)	10.9 [10.3–11.8]	10.8 [10.0–11.5]	0.132
P-LCR (%)	32.9 [27.6–39.9]	31.1 [25.1–38.0]	0.109
PCT (%)	0.2 [0.2–0.3]	0.2 [0.2–0.3]	0.845
Glucometabolic indexes			
Glu (mmol/L)	5.2 [4.8–6.2]	5.8 [4.9–7.4]	**0.012**

HbA1c (%)	5.8 [5.5–6.5]	5.8 [5.5–7.5]	0.366
Coagulation function			
PT (s)	13.3 [12.9–13.8]	13.3 [13.0–13.9]	0.264
PTA (%)	99 [91–106]	97 [89–102]	0.107
INR	1.0 [1.0–1.1]	1.0 [1.0–1.1]	0.094
FIB (g/L)	3.2 [2.8–3.8]	3.7 [3.0–4.1]	**0.002**
APTT (s)	37.4 [34.9–40.0]	37.6 [35.2–40.8]	0.518
TT (s)	16.3 [15.8–17.1]	16.4 [15.8–17.2]	0.844
D-dimer (mg/L)	0.3 [0.2–0.5]	0.5 [0.3–0.8]	**0.011**

Continuous variables are presented as the median [interquartile range]; $p<0.05$ was considered statistically significant, which was obtained by Mann–Whitney *U*-tests. Abbreviations: Hcy, homocysteine; TG, triglyceride; TC, total cholesterol; HDL, high-density lipoprotein; LDL-C, low-density lipoprotein cholesterol; ALT, alanine transaminase; AST, asparagine transaminase; BUN, blood urea nitrogen; Cr, serum creatinine; eGFR, glomerular filtration rate; Glu, blood glucose; HbAc1, glycosylated hemoglobin; PLT, platelet count; PDW, platelet distribution width; MPV, mean platelet volume; P-LCR, platelet large cell ratio; PCT, thrombocytocrit; PT, prothrombin time; PTA, prothrombin activity; INR, international normalized ratio; FIB, fibrinogen; APTT, activated partial thromboplastin time; TT, thrombin time.

Table 5. Association of TEG parameters with hemorrhagic events

	Non-hemorrhage (*n*=798)	**Hemorrhage (*n*=61)**	***p*-value**
R (min)	5.6 [4.9–6.3]	5.8 [4.9–6.9]	0.101
K (min)	1.4 [1.2–1.7]	1.5 [1.2–1.7]	0.123
α-Angle (°)	74.5 [72.0–76.7]	73.5 [71.5–75.6]	0.070
MA (mm)	62.4 [58.7–65.9]	62.9 [58.9–66.5]	0.411
MA_{ADP} (mm)	32.2 [18.9–42.3]	22.0 [12.9–41.4]	**0.033**
ADP% (%)	58.7 [38.7–81.6]	78.6 [45.5–93.9]	**0.012**
AA% (%)	97.3 [86.1–100]	94.3 [74.6–100]	0.092

Continuous variables are presented as the median [interquartile range]; $p<0.05$ was considered statistically significant, which was obtained by Mann–Whitney *U*-test. Abbreviations: R, reaction time; K, clot formation time; MA, maximum amplitude; MA_{ADP}, ADP-induced platelet-fibrin clot maximum amplitude; ADP%, ADP inhibition rate; AA%, AA inhibition rate

Table 6. Data of the population with stenosis

Characteristics	All (*n*=315)	Non-hemorrhage (*n*=282)	Hemorrhage (*n*=33)	*p*-value
Location of stenosis, *n* (%)				1.000
Anterior circulation	217 (68.9)	199 (70.6)	18 (54.5)	
Posterior circulation	95 (30.2)	81 (28.7)	14 (42.4)	
Anterior and posterior circulation	3 (0.9)	2 (0.7)	1 (3.0)	

Categorical variables are presented as *n* (%). $p<0.05$ was considered statistically significant.

Table 7. Predictors for hemorrhagic events in stenosis population

	Univariate		Multivariate	
	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
NIHSS	1.15 (1.04–1.26)	0.005	1.15 (1.04–1.28)	0.006
LDL-C	1.65 (1.13–2.41)	0.009	–	–
eGFR	1.03 (1.00–1.05)	0.033	1.04 (1.01–1.07)	0.003
Glu	1.18 (1.00–1.39)	0.041	1.27 (1.05–1.55)	0.017
MA_{ADP}	0.96 (0.94–0.99)	0.004	–	–
ADP%	1.02 (1.00–1.04)	0.004	1.03 (1.00–1.04)	0.005

Variables with $p<0.05$ in the univariate analysis were put into the multivariate logistic regression model. Abbreviations: CI, confidence interval; OR, odds ratio; NIHSS, National Institutes of Health Stroke Scale; LDL-C, low-density lipoprotein cholesterol; eGFR, glomerular filtration rate; Glu, blood glucose; MA_{ADP}, ADP-induced platelet-fibrin clot maximum amplitude; ADP%, ADP inhibition rate.

Table 8. Predictors of hemorrhagic events in patients with anterior circulation stenosis

	Univariate		Multivariate	
	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
TG	1.82 (1.14–2.89)	0.011	1.18 (1.10–2.87)	0.019
LDL-C	1.89 (1.13–3.13)	0.015	–	–
ADP%	1.02 (1.00–1.05)	0.025	1.02 (1.00–1.04)	0.034

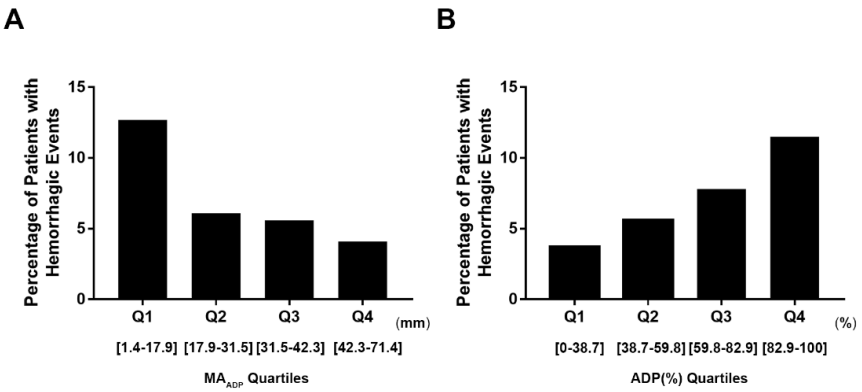
Variables with $p<0.05$ in the univariate analysis were entered into the multivariate logistic regression model. Abbreviations: CI, confidence interval; OR, odds ratio; TG, triglyceride; LDL-C, low-density lipoprotein cholesterol; ADP%, ADP inhibition rate.

Table 9. Predictors of hemorrhagic events in patients with posterior circulation stenosis

	Univariate		Multivariate	
	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
NIHSS	1.19 (1.02–1.38)	0.003	1.22 (1.03–1.44)	0.019
Angle	0.87 (0.75–0.96)	0.011	0.84 (0.73–0.96)	0.009
MA	0.89 (0.81–0.99)	0.035	–	–
MA_{ADP}	0.96 (0.92–1.00)	0.044	–	–
ADP%	1.02 (0.99–1.04)	0.160	–	–

Variables with $p<0.05$ in the univariate analysis were entered into the multivariate logistic regression model. Abbreviations: CI, confidence interval; OR, odds ratio; NIHSS, National Institutes of Health Stroke Scale; MA, maximum amplitude; MA_{ADP}, ADP-induced platelet-fibrin clot maximum amplitude; ADP%, ADP inhibition rate.

Figure 1. Quartile distributions of hemorrhagic events for TEG parameters.



A chi-square test was used to compare the percentage of hemorrhagic events in each quartile (Q1–Q4), which revealed significant differences (p<0.05). **A.** The percentage of hemorrhagic events was negatively correlated with MA_{ADP} as follows: Q1: [1.4–17.9] mm; Q2: [17.9–31.5] mm; Q3: [31.5–42.3] mm; Q4: [42.3–71.37] mm. **B.** The percentage of hemorrhagic events was positively correlated with ADP% as follows: Q1: [0–38.7]%; Q2: [38.7–59.8]%; Q3: [59.8–82.9]%; Q4: [82.9–100]%.