

Supplementary File

Suppl-Methods

Treatment approaches

All enrolled patients were treated according to current guidelines for acute stroke, which are updated whenever new scientific evidence becomes available.^{1, 2} Patients received intravenous alteplase within 4.5 hours after the onset of stroke if they met accepted criteria for intravenous thrombolysis.¹ Without waiting for alteplase effect, patient was sent to interventional room as fast as possible to undertake mechanical thrombectomy. However, in cases with a suspicion of a large thrombus burden, or refusal of intravenous thrombolysis from the patients or their informants, the neurointerventionist might decide direct mechanical thrombectomy. For those patients with onset to treatment time >6 hours, some centers still performed intervention based on their perfusion status on computed tomography perfusion, collateral flow on CTA, and infarct size on diffusion-weighted imaging. After recanalization of the target artery, most of the patients were transferred to the neuro-intensive care unit for at least 24 hours with their systolic blood pressure maintained at 120–140 mmHg. Additionally, the patients who underwent extracranial or intracranial stent implantation were prescribed antithrombotic medication to prevent acute stent thrombosis.

van Swieten scale³

van Swieten scale is a simple scale rating severity of LA on 3 sequential axial CT slices (through the choroid plexus of the posterior horns, through the cella media, and through the centrum semiovale) . The severity is expressed into 3 degrees: 0= no white matter hypodensity, 1= hypodensity restricted to the region adjoining the ventricles, 2= hypodensity involving the entire region from lateral ventricle to the cortex. Anterior (around the anterior horns of the lateral ventricles) and posterior regions (around the posterior part of the cella media and the posterior part of the centrum semiovale) are evaluated separately giving overall scores from 0 to 4

Diagnosis of Symptomatic Intracranial Hemorrhage According to Heidelberg Bleeding Classification⁴

Symptomatic intracranial hemorrhage was diagnosed if the new observed intracranial hemorrhage was associated with any of the following conditions: (1) NIHSS score increased >4 points than that immediately before worsening; (2) NIHSS score increased >2 points in 1 category; (3) deterioration led to intubation, hemicraniectomy, external ventricular drain placement, or any other major interventions. In addition, the symptom deteriorations could not be explained by causes other than the observed intracranial hemorrhage.

IVT, n (%)	37 (32.5)	45 (32.8)	0.948	33 (31.1)	28 (32.6)	0.833	60 (31.4)	22 (36.7)	0.449
ASITN/SIR ≥ 2 , n (%)	82 (71.9)	56 (40.9)	<0.001	77 (72.6)	41 (47.7)	<0.001	118 (61.8)	20 (33.3)	<0.001
OTR, median (IQR), min	347 (279-427)	366 (296-455)	0.151	345 (274-427)	342 (283-443)	0.708	353 (283-435)	365 (304-476)	0.155
mTICI 2b /3, n (%)	106 (93.0)	86 (62.8)	<0.001	106 (100)	86 (100)		165 (86.4)	27 (45.0)	<0.001

ASITN/SIR indicates American Society of Interventional and Therapeutic Neuroradiology/Society of Interventional Radiology; CHD, coronary heart diseases; FR, futile recanalization; IVT, intravenous thrombolysis; LA, leukoaraiosis; LAA, large-artery atherosclerosis; mRS, modified Rankin Scale; mTICI, modified Thrombolysis in Cerebral Infarction; NIHSS, National Institutes of Health Stroke Scale; OTR, symptoms onset to recanalization time; SBP, systolic blood pressure.

References

1. Jauch EC, Saver JL, Adams HP, Jr., et al. Guidelines for the early management of patients with acute ischemic stroke: A guideline for healthcare professionals from the american heart association/american stroke association. *Stroke*. 2013;44:870-947.
2. Powers WJ, Derdeyn CP, Biller J, et al. 2015 american heart association/american stroke association focused update of the 2013 guidelines for the early management of patients with acute ischemic stroke regarding endovascular treatment: A guideline for healthcare professionals from the american heart association/american stroke association. *Stroke*. 2015;46:3020-3035.
3. van Swieten JC, Hijdra A, Koudstaal PJ, et al. Grading white matter lesions on ct and mri: A simple scale. *Journal of neurology, neurosurgery, and psychiatry*. 1990;53:1080-1083.
4. von Kummer R, Broderick JP, Campbell BC, et al. The heidelberg bleeding classification: Classification of bleeding events after ischemic stroke and reperfusion therapy. *Stroke*. 2015;46:2981-2986.