Appendix 1 Methods—analysis of post-label delay

We performed preliminary experiments using 0.5, 1.0, 1.5, 2.0, and 2.5 s post label delay (PLD) and found that the labeled blood did not reach the capillary bed in patients with cerebrovascular disease. This would result in an inaccurate estimation of hypoperfused tissue volumes. Therefore, we chose 1.0, 1.5, 2.0, 2.5, and 3.0 s PLD for this study.

Table S1 MR imaging parameters

Parameters	DSC-PWI	pCASL	DWI	TOF-MR angiography	T2WI
Repetition time (ms)	1,500	4,600	2,900	21	3,200
Echo time (ms)	30	32	73	3.42	99
Section thickness (mm)	5	3.5	5	0.8	5
Slices	19	32	19	4 slabs, 40 slices/slab	19
FOV (mm^2)	220×220	224×224	240×240	220×172	220×220
Matrix	128×128	64×64	168×134	320×237	384×288
Acquisition time	1min 38s	6min 3s	23s	3min 44s	38s

MR, magnetic resonance; DSC-PWI, dynamic-susceptibility contrast perfusion-weighted imaging; pCASL, pseudo-continuous arterial spin labeling; DWI, diffusion-weighted imaging; TOF, time-of-flight; T2WI, T2-weighted images; FOV, field of view.

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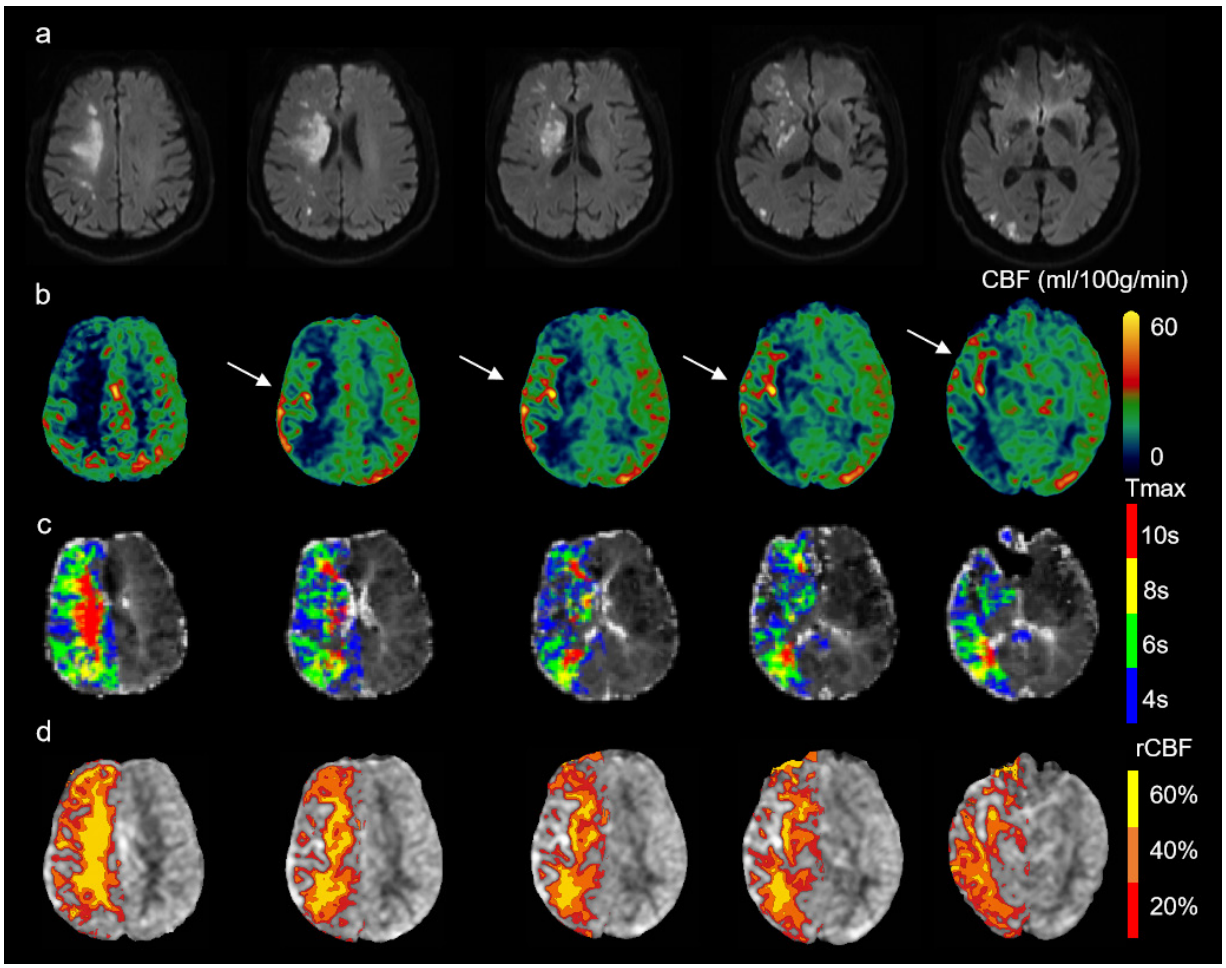

Figure S1 Representation of the arterial transit artifacts in a 64-year-old male with occlusions in the right internal carotid artery. (A) The diffusion-weighted imaging images show the acute ischemic lesion in the right frontoparietal-temporal lobe, centrum semiovale, and basal ganglia; (B) the signs of ATA (arrows) are visible in the right middle cerebral artery supply area in the CBF map; (C) the Tmax maps and (D) rCBF maps derived from the dynamic susceptibility contrast-enhanced perfusion-weighted imaging and pseudo-continuous arterial spin labeling data do not show exact matching because of ATA. ATA, arterial transit artifact; CBF, cerebral blood flow; rCBF, relative cerebral blood flow.

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