**Supplementary Materials**

***Intramural hematoma shape and acute cerebral infarction in intracranial artery dissection; a high-resolution magnetic resonance imaging study***

**Supplementary Methods**

**I. Inclusion and exclusion criteria**

Inclusion criteria

(1) Enrollment within 7 days of symptom onset

(2) HRMRI within 7 days of symptom onset

(3) Definitive IAD on HRMRI

Exclusion criteria

(1) Obviously severe atherosclerotic stenosis of the relevant vessel

(2) Vasculitis

(3) Moyamoya disease

(4) Thromboembolism

(5) Two or more causes

(6) Unknown cause

(7) Hypercoagulable state

(8) Brain tumor

**II. Imaging protocol**

All patients first underwent diffusion-weighted imaging, conventional MRI (T1- and T2-weighted imaging and fluid-attenuated inversion recovery), and MRA, including time-of-flight (TOF) of the circle of Willis and contrast-enhanced MRA of the circle of Willis and extracranial vessels. Computed tomography angiography was substituted for MRA in cases in which MRA was unavailable. To validate the diagnosis, HRMRI was performed for patients with abnormal findings on conventional MRI.

HRMRI was performed using a 3-Tesla (3T) scanner with a 20-channel head coil (MAGNETOM Skyra, Siemens, Germany). Two-dimensional sequences and blood-flow suppression images were acquired using turbo spin echo (TSE) with variable-flip-angle refocusing radio frequency pulses (sampling perfection with application-optimized contrast using different angle evolutions (SPACE)). Three-dimensional TOF MRA was performed using the following parameters: slice thickness=0.5 mm, repetition time/echo time (TR/TE)=21/3.69 ms, flip angle=18°, field of view (FOV)=230 × 186.9 mm, and matrix size=448 × 291. Two-dimensional proton density-weighted imaging (PDWI) was performed using the following parameters: in-plane resolution=0.39 × 0.39 mm, slice thickness=2 mm, TR/TE=2,450/37 ms, FOV=100 × 100 mm, and matrix size=195 × 256. The number of slices was 15, and the acquisition time was 224 seconds. Two-dimensional 6T1-weighted imaging (T1WI) was performed using the following parameters: in-plane resolution=0.39 × 0.39 mm, slice thickness=2 mm, TR/TE=670/9.1 ms, FOV=100 × 100 mm, and matrix size=282 × 256. The number of slices was 15, and the acquisition time was 222 seconds. Two-dimensional contrast-enhanced T1-weighted imaging (CE-T1WI) after the administration of intravenous gadolinium (gadobutrol, 0.1 mmol/kg body weight) (Gadovist; Bayer Schering Pharma, Berlin, Germany) with TSE sequences was performed using the following parameters: in-plane resolution=0.39 × 0.39 mm, slice thickness=2 mm, TR/TE=670/9.1 ms, FOV=100 × 100 mm, and matrix size=256 × 256. The number of slices was 15, and the acquisition time was 202 seconds. The total acquisition time was approximately 30 minutes. The scanning orientation was transversal, and the 3D images were reconstructed into coronal, axial, and sagittal images.