Supplementary Criteria

Supplementary file for: Analyzing the early clinical and imaging outcomes of STA-MCA bypass surgery via three-dimensional volumetric measurement in patients with intracranial atherosclerosis

Author: Nattakitta Mektripop[1,3], Pongsakorn Pongsapas[2], Pichamon Sirilar[1], Dollapak Sakulpanich[1], Phoomphisit Dejchaiyasak[1], Pimpitcha Lertkiatdamrong[1], Wiriya Mahikul[1], Hattapark Dejakaisaya[1], Payothorn Decharin[2]

Affiliations:
[1]Princess Srisavangavadhana Faculty of Medicine, Chulabhorn Royal Academy, 906 Kampangpetch 6 Rd, Talat Bang Khen, Lak Si, Bangkok 10210, Thailand
[2]Division of Neurological Surgery, Department of Surgery, Chulabhorn Hospital, Chulabhorn Royal Academy, Bangkok 10210, Thailand
[3]Division of Neurosurgery, Department of Surgery, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Bangkok, 10330, Thailand

Corresponding author: Payothorn Decharin, payothorn.dec@cra.ac.th

Detailed Inclusion and Exclusion Criteria

Inclusion criteria:

- Age ≥ 18 years.
- Diagnosis of ischemic stroke or transient ischemic attack (TIA) caused by intracranial atherosclerotic disease (ICAD).
- Imaging evidence (MRI, CTA, or DSA) of significant stenosis (>70%) or occlusion of the middle cerebral artery (MCA) or internal carotid artery (ICA).
- Recurrent ischemic stroke or TIA within six months despite receiving best medical therapy (defined as ongoing dual antiplatelet therapy).
- Preoperative confirmation of hypoperfusion in the corresponding vascular territory, demonstrated by CT perfusion (CTP) evidence of ischemic penumbra.
- Clinical and diagnostic evaluation excluding other causes of ischemic events, including cardiogenic embolism, vasculitis, arterial dissection, moyamoya disease, and other non-atherosclerotic conditions.
- Patients with minimal or no measurable neurological deficit (NIHSS = 0) were eligible if they had recurrent ischemic symptoms, radiological evidence of significant stenosis/occlusion, and confirmed hypoperfusion on CTP.

Exclusion criteria:

- History of intracranial hemorrhage.
- Active systemic disease or unstable hemodynamic parameters interfering with cerebral perfusion assessment.
- Local or systemic infection involving the surgical site.
- Severe cognitive impairment or dementia that could interfere with rehabilitation or study compliance.
- Comorbid conditions conferring excessive surgical risk or life expectancy <1 year.