

신경근육재활 및 전기진단

게시일시 및 장소 : 10 월 18 일(금) 13:15-18:00 Room G(3F)

질의응답 일시 및 장소 : 10 월 18 일(금) 15:45-16:30 Room G(3F)

## **P 2-151**

### **Cerebral Infarction after Clipping of Anterior Choroidal Aneurysm with No Abnormal IONM findings**

Sang Beom Kim<sup>1†</sup>, Kyeong Woo Lee<sup>1</sup>, Jong Hwa Lee<sup>1</sup>, Young Hwan Kim<sup>1\*</sup>

Dong-A University Hospital, Department of Rehabilitation Medicine<sup>1</sup>

#### **Introduction**

Anterior choroidal artery aneurysms (AChoAA) are rare and count for less than 5% of all intracranial aneurysms. AChoAA has a particular significance as its first branches generally supply the posterior limb of the internal capsule that contains corticospinal fibers. In some case which is impossible to manage through coiling procedure, surgical intervention for clipping of the aneurysm is needed. And the procedure has the risk to hamper the blood supply, which leads to cerebral infarction. Motor evoked potential (MEP) modifications precede the occurrence of an irreversible ischemic lesion and may provide the basis for immediate corrective procedures. Intraoperative neurophysiologic monitoring (IONM) in clipping of anterior choroidal aneurysm surgery is useful to prevent ischemic stroke and severe post surgical outcome. But, there is little case report which showed AChoAA clipping with IONM and no IONM guideline or protocol about AChoAA clipping surgery. This is the case with cerebral infarction after the clipping of AChoAA with no abnormal signal in intraoperative neurophysiologic monitoring.

#### **Case Report**

A 63-year-old woman with a history of coiling of ruptured right posterior communicating artery aneurysm had visited hospital for regular check-up, and unruptured left anterior choroidal aneurysm had been incidentally found (Fig. 1). She had an elective surgery for clipping of the aneurysm with intraoperative neurophysiologic monitoring, which showed no specific finding in MEP of upper and lower extremities. And the last MEP test was done 30 minutes after clipping of the aneurysm (Fig. 2). About 10 hours after surgery, she regained consciousness fully and felt weakness in right limbs. And brain MRI was taken and showed internal capsule infarction where blood was supplied by the anterior choroidal artery (Fig. 3). Nimodipine for preventing vasospasm was prescribed and she was transferred to rehabilitation unit 3 days after the infarction. Initial motor power in right limbs was less than grade 3. After 7 weeks of rehabilitation, her condition improved, but she needed moderate assistance for the activities such as washing, toileting, bathing and clothing, and supervision for gait with single cane due to hemiplegia.

#### **Discussion**

In this case, the exact time when the stroke occurred was uncertain. Thus, the exact cause and mechanism of the stroke were unknown. But, judging from the stroke pattern in brain MRI, the cause of the stroke seemed to be associated with the clipping site, rather than post-operative vasospasm. Therefore, extended IONM might be helpful to detect late-onset, clipping-related infarction.

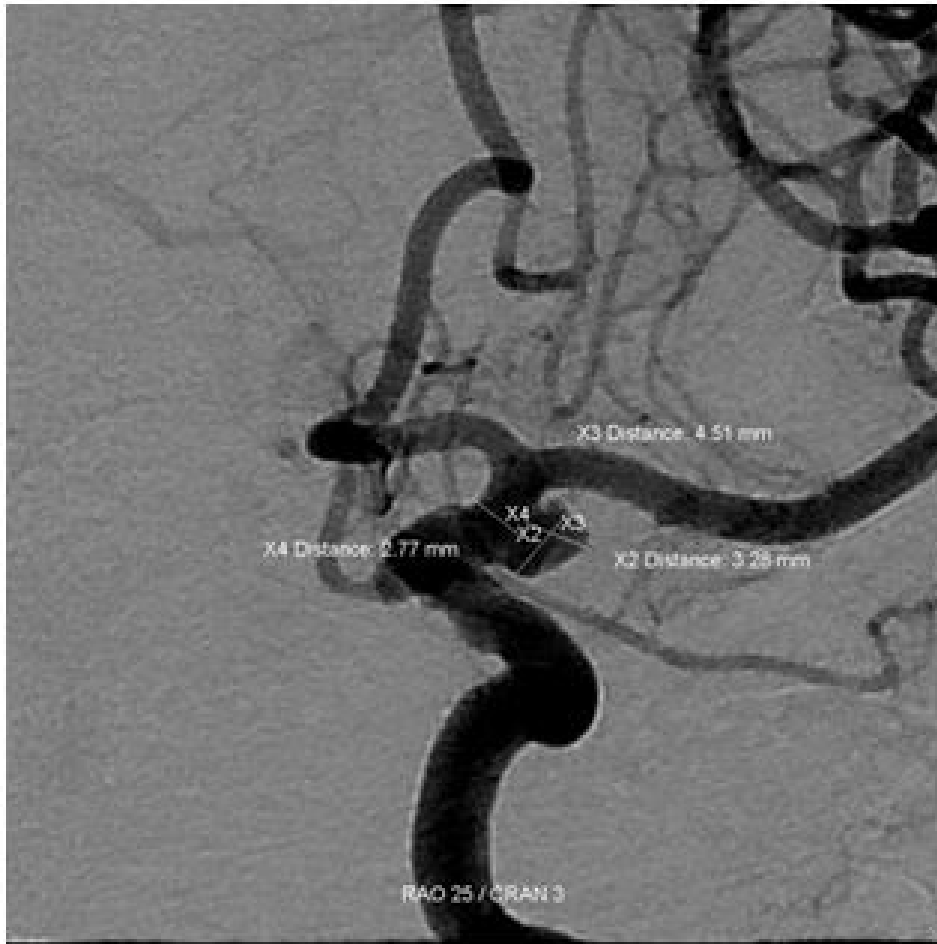


Figure. 1. Angiography showed aneurysm in left anterior choroidal artery with wide neck appearance

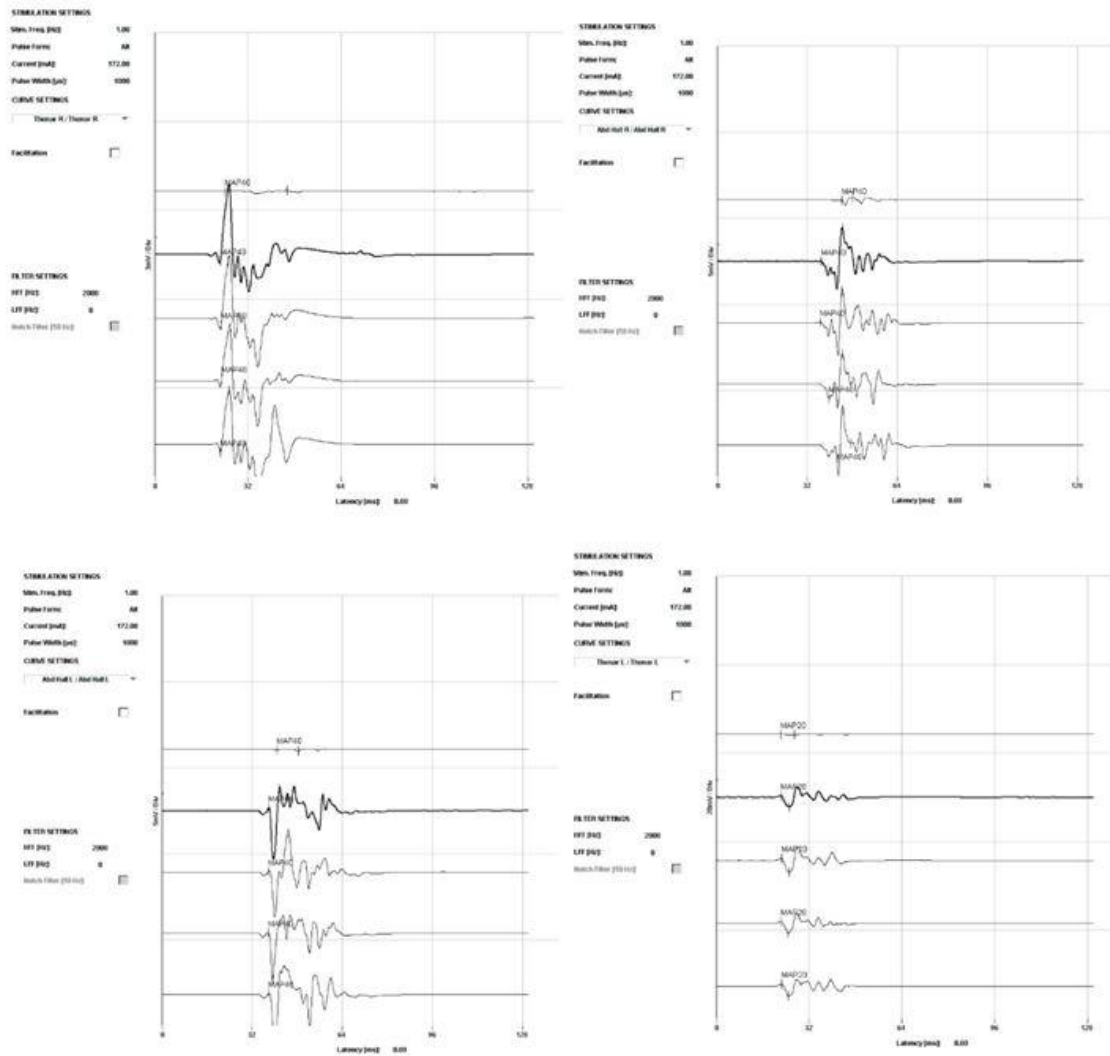


Figure. 2. EMG signals in both upper extremities and lower extremities showed no change in amplitude and latency throughout the operation

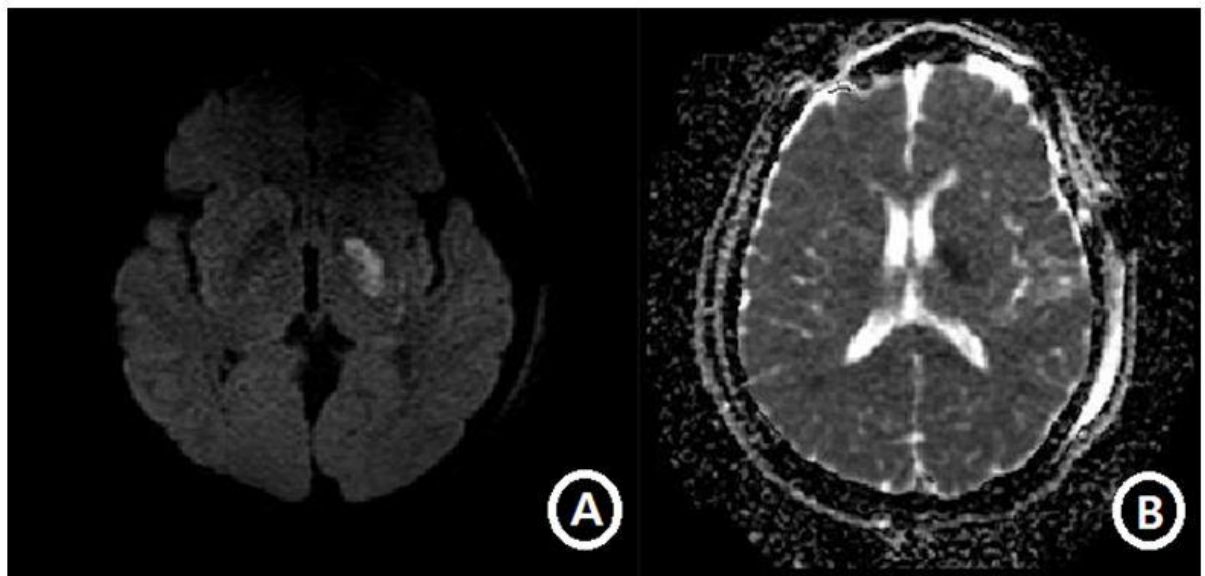


Figure. 3. Brain MRI was taken after surgery. Diffusion weighted image (A) and Apparent diffusion coefficient image (B) showed infarction around left internal capsule