

論文内容の要旨

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Transient Augmentation of Intraoperative Motor Evoked Potentials During Middle Cerebral Artery Aneurysm Surgery			

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Abstract

Objective: To study the clinical significance of the augmentation of intraoperative motor evoked potentials (MEPs) during direct open surgery for middle cerebral artery (MCA) aneurysms.

Methods: Between 2009 and 2017, there were 134 MCA aneurysm surgeries performed with intraoperative MEP monitoring. The frequency and the cause of the augmentation with more than a 50% increase of MEP amplitude from the baseline were studied. Furthermore, the factors associated with MEP augmentation were investigated.

Results: Nine patients showed MEP augmentation, and all 9 events were observed just after application of the temporary clip to the parent artery. The ratio of the maximum amplitude to baseline was 2.6 ± 1.1 , at an average of 2.4 ± 1.1 min after parent artery occlusion. On the other hand, 10 patients did not show MEP augmentation after parent artery occlusion, and they were compared with the patients showing MEP augmentation. It was found that the distance of the temporary clip point from the midline was smaller in patients with MEP augmentation than in those without ($p=0.033$).

Conclusions: MEP augmentation was thought to be an early ischemic sign preceding a significant decrease during MCA aneurysm surgery. Transient augmentation of MEPs was more frequently observed in cases with a temporary clip applied to the more proximal part of the MCA.