

COMPLETE OCULOMOTOR NERVE PALSY CAUSED BY DIRECT COMPRESSION OF POSTERIOR CEREBRAL ARTERY

Y.S. Jo¹, S.D. Han¹, J.Y. Choi¹, S.K. Kim²

¹Department of Neurology & ²Department of Rehabilitation Medicine, Konkuk University School of Medicine, Chungju, Republic of Korea

Oculomotor nerve palsy is frequently occurred due to external compression by an internal carotid-posterior communicating artery aneurysm and diabetes mellitus. However a case of complete oculomotor nerve palsy by neurovascular conflicts presented with sudden onset of the symptoms is extremely rare. We experienced a rare case of complete oculomotor nerve palsy due to direct vascular compression of oculomotor nerve by the posterior cerebral artery.

A 48 year-old man presented right ptosis and diplopia with two years history of uncontrolled hypertension.

The neurological examination showed complete right oculomotor nerve palsy; dilated pupil with limited adduction, elevation, and depression was present in the right eye. We undertook magnetic resonance imaging (MRI) and angiography (MRA) to define intracranial structural lesion caused oculomotor nerve palsy. High resolution thin-sliced MRI was performed, in order to evaluate the right oculomotor nerve, demonstrated right oculomotor nerve compression by right posterior cerebral artery. We diagnosed the direct compression of oculomotor nerve by posterior cerebral artery.

Non-aneurysmal compression of the oculomotor nerve is a condition rarely reported in the literature. In this case, an idiopathic cause of acute complete oculomotor nerve palsy was showed after a high-resolution MRI of the head, which revealed the unilateral neurovascular conflict. Herein, we suggest that the complete oculomotor nerve palsy may be assumed to be secondary to the pulsating action exerted by posterior cerebral artery, generating a mechanical stress. Vascular sclerotic change by newly developed hypertension and aging may also contribute to vessel compression of oculomotor nerve.