Fluctuating Foville’s Syndrome Caused by a Pontine Angioma in a Patient with a Polycystic Kidney

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Vascular events are sometimes observed in patients undergoing hemodialysis due to chronic renal failure. If a patient complains of repeated disturbances of eye movement with fluctuation before and after hemodialysis, it suggests the presence of an ischemic stroke due to dehydration. Otherwise it is likely a myasthenic syndrome such as myasthenia gravis. Although intracranial hemorrhage seldom causes a repeated disturbance with fluctuation, an atypical pathogenesis, including angioma-related hemorrhage, sometimes induces a fluctuating disturbance of eye movement.

A 61-year-old man with a fluctuating disturbance in his eye movements came to our hospital. He had been diag-
nosed with chronic renal failure due to polycystic kidney (PCK) and treated with hemodialysis for more than 10 years before this episode. Two of his brothers also had PCK. The patient complained that his eye movement disturbance occurred occasionally and had begun with fluctuation after hemodialysis twice a week. He said that it had been difficult to gaze to the right for 2 weeks before admission. On admission, the patient was alert, with a prompt light reflex, and isocoric pupils. Right conjugate gaze palsy (Picture 1A) and dysarthria were observed. In addition, a mild left hemiparesis was present. No ataxia, abnormality of deep tendon reflex, or sensory disturbance was observed. Neurological examination revealed alternate hemiparesis corresponding to Foville’s syndrome, suggesting an ischemic stroke due to dehydration from excessive hemodialysis. However, T1-weighted MRI (Picture 1B) showed a vascular structure with small high intensity spots in the dorsal portion of the pons, and T2-weighted MRI (Picture 1C) revealed a mosaic pattern of low and high intensities. Laboratory examination revealed slight anemia, thrombocytopenia, and renal failure. The patient was diagnosed as having a microhematoma in a pontine angioma, and brain MRI showed no ischemic lesions. We felt that the size of this hematoma in the angioma was increased due to the use of anticoagulants, such as heparin, during hemodialysis.

Most cerebrovascular events that occur during hemodialysis are ischemic strokes resulting from dehydration, and the frequency of hemorrhagic events has decreased in recent years. On the other hand, PCK is known to complicate cranial aneurysmal diseases in some cases (1, 2). In addition, cases of arteriovenous malformation or venous angiomyolipomas associated with PCK have been reported (3, 4), suggesting that patients with PCK should be screened for vascular complications. These previous reports suggest that vascular complications, including cavernous angioma as found in this case, may be associated with PCK. The present findings suggest that a hemorrhage may occur during hemodialysis, especially in patients with PCK-related vascular malformations.

References