P-44

Successful recovery of after large paramedian pontine intracerebral hemorrhage in a young woman

Ji Ye Lee, Youn Joo Kang
Department of Rehabilitation Medicine, Nowon Eulji Medical Center, Eulji University, Seoul, Korea

Background

Pontine hemorrhages start in the brainstem nuclei and extend to the base of the pons. The incidence of ICH increases with age, doubling every 10 years after age 35. The signs and symptoms of ICH depend on the location and size of the hemorrhage. The large size of the hemorrhage is associated with neurologic deterioration, the development of increased intracranial pressure, and worse outcomes. And early prognosis is determined by clinical and imaging determinants.

Case

A 30-year-old woman with no past history transferred to the emergency room due to loss of consciousness. She did not open her eyes to the pain and had no verbal response. And she had an withdrawal response to the pain. (total GCS 6) When her strength was evaluated by giving pain, her right limbs were almost motionless (grade 1), and her left limbs had enough strength to resist gravity (grade 3). She was intubated and placed in intensive care.

Two weeks later, when she transferred to department of rehabilitation medicine, she only could sit. There was a slight change in the right lower limb (grade 2), but no change was observed in the upper limb. Electrodiagnostically, motor evoked potential responses were normal except prolonged right upper extremity. Through continuous right upper and lower extremity strength training, the upper extremities can counteract gravity (grade 3) and the lower extremities can resist moderate resistance (grade 4). However, she had difficulty maintaining her standing balance and had to maintain wheelchair ambulation upon discharge.

Even after discharge, she continued active rehabilitation through outpatient treatment. After 6 months, the berg balance test improved to 36 points, and the Modified Barthel index also improved to 65 points. The fugl- Meyer assessment was 45 points, and the function of the upper extremities was generally recovered. In addition, right peripheral nerve facial palsy was improved from severe to moderate, and shedding during meals was improved. As a result, she was able to walk independently and recover daily functions within 6 months of onset.

MRI

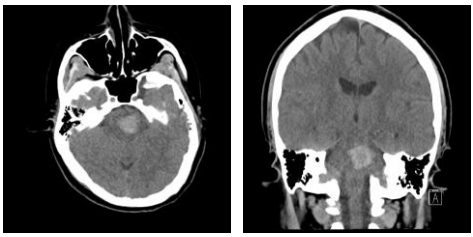

Fig 1. About 2.5 x 1.8 cm sized acute ICH at pons

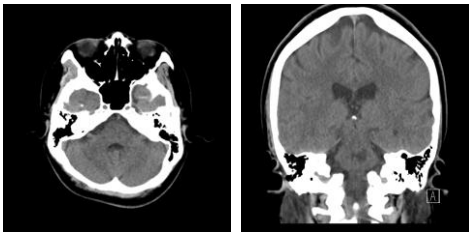

Fig 2. Resolved ICH status in pons 2 months after onset

Motor Evoked Potential

MEP

Stimulation	Muscle	Hot spot (10/20)	rMT(%)	Latency (ms)	Amp. (μV)
Contralateral Cortex	Lt. APB	(7,3)	60	18.4	1158
	Rt. APB	(-7,3)	70	23.4↑	139
Contralateral Cortex	Lt. TA	(1,1)	80	25.4	381
	Rt. TA	(-1,1)	80	27.5	204

Table 1. Prolonged motor evoked potential responses in only Rt. upper extremity

Discussion

In the case of large paramedian pontine hemorrhage, especially if patients with coma on admission, pupillary abnormalities, intraventricular extension hydrocephalus and large hematomas, most of them lead to a fatal outcome and poor prognosis. Nevertheless, through continuous rehabilitation treatment, recovery of upper and lower extremity muscle strength and overall functional improvement including peripheral nerve facial palsy can be expected.