

Brain Injury (April 7, 2009)

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The patient is a 24-year-old girl and was presented with cognitive impairment, quadriplegia and paroxysmal convulsion attack for 7 months post cardio-pulmonary resuscitation. She was diagnosed as "severe anoxic encephalopathy." Patient received an appendectomy 10 months ago, and after the operation the patient had a cardiac arrest for about 20 minutes in the ICU room. The doctors gave her cardio-pulmonary resuscitation and she regained cardiac and breathing gradually. Then the patient had a series of complications such as lance-Adam syndrome, systemic inflammatory response syndrome (SIRS), pneumonia, sinus tachycardia, Takotsubo syndrome, central hyperpyrexia and repeated urinary tract infection. Patient's condition was much more stable after active treatment in Austria, and her infection was controlled. But the patient lost consciousness, had no response to pain, lost stimulation to noise and light. She had repeated seizure attacks, and her 4 limbs had paroxysmal convulsions and spasms. About 2 months ago, she started to show some response to pain, the spasms and convulsions on the left side of her body alleviated slightly, she had little vocals, accompanied with grand mal epilepsy.

Admission PE: Her vital signs are all stable and she had gatsrostomy. The heart, lungs and abdomen are all normal by physical examination.

Neural system examination: Patient is in twilight state with poor conscious content. She had few vocals, the bilateral pupils are equal and round, diameter is about 3.0mm, she had clumsy response to light, and corneal reflex was remaining. There is paroxysmal when staring upwards on the left side of both eyes. The eyes cannot move freely to the right side or downwards. Eye socket-pressing reflex is ok. She cannot cooperate examination of other cranial nerves. Muscle force of 4 limbs is 3-4 degrees, muscle tone is higher than normal, tendon reflex of 4 limbs are decreased more than normal. Bilateral Babinski signs are positive; she cannot cooperate medical examination of her sensor system and coordinate movement.

Electroencephalogram (EEG 08.3.26): Iregular EEG showed abnormal bilateral cerebral hemispheres, without signs of accurate lesion and constructional irritation.

Brain MRI (08.9.3): There is obvious broadening and enlargement of the bilateral temporal horns, with obvious hippocampi atrophy. There is no clear border of signal change of supratentorial below the tentorium. No signal change of the thalamencephalon area.

Case analysis: Patient is a young female and was healthy before. She had cognitive impairment, quadriplegia and paroxysmal convulsion attacks for 7 months post cardio-pulmonary resuscitation. Patient had poor conscious content; there is limited eyeball movement. She had mixed aphasia. Patient has abnormal muscle tone in her 4 extremities. Patient cannot cooperate medical examination of her bilateral pathological signs and sensor system. EEG and Brain MRI indicated impaired bilateral cerebral hemispheres. After her admission, she received a diagnosis of severe anoxic encephalopathy (convalescent stage).

Patient received basic treatment to improve the blood circulation in her brain, and to nourish the brain cells, clear away the free radicals to improve her brain microenvironment. The doctors gave the patient 4 stem cells activation treatments, combined with daily rehabilitation to give the physical signal stimulation to train her neural system and help the neuron's reparation.

After treatment, the patient's condition improved greatly: she has more motion response, her eyeballs can move more flexibly than before, she can chew food by herself, and her facial expressions are more natural. Now the patient's neck is much more relaxed, and she can lift and shake her head. Patient has voluntary movement, but she cannot control it freely. Muscle tone is normal, and the bending status is alleviated after treatment.