

Multiple Sclerosis (March 26, 2009)

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The patient is a 43-year-old male, he presented progressive motor disturbance of his four limbs for 20 years, and his symptoms have become more aggravated during the past 7 months. He was diagnosed with MS (multiple sclerosis).

About 20 years ago, the patient had weaknesses in his body, with balance disturbances on the right side of the body. He cannot walk in a straight line, and he has tremors in both hands. He cannot complete any fine motors functions. 2 years later, the symptoms got worse, and he has fallen frequently. During this period, he came to the hospital many times, and in 1990, had a brain MRI and vertebral column MRI, and the results supported his diagnosis of MS. The patient's symptoms progressed gradually, and in 1993, he was completely bed ridden, and he had other symptoms such as difficult defecation, difficulty with swallowing, difficulty with his speech and he can longer move his limbs.

The patient has no medical history of any chronic disease, hepatitis, tuberculosis or any other infectious disease. The patient has no history of trauma or blood transfusion or allergies to drugs.

Admission PE: Bp 100/88 mmHg, HR 96/min. Normal nutrition status. There is normal development of his chest. His heart, lungs and abdomen are all ok.

Neural system examination: alert, mental status is weak. The patient has rigid facial expression. He has speech disturbance. There are disturbances when his eyes look upward and his left eye looks to left side. He has diplopia of the left visual field; there is vertical nystagmus of both eyes. His tongue protrudes to the left side slightly, with mild tongue muscle atrophy of his left side. The soft plate cannot lift powerfully. Muscle tone of his 4 limbs is higher than normal with severe rigidity of his lower limbs. The muscle force of his right arm is 1 degree, while the left side and both legs are 0 degree. Abdomen reflex is normal. Tendon reflex of both lower limbs are active. Sucking reflex and palmomental reflex is positive. Pathology reflex of both lower limbs are positive. He has hypalgesia on the right side of the body, and he cannot coordinate his movements completely.

Assistant examination:

Brain MRI and spinal MRI (1990), which supported the diagnosis of MS.

Oligoclonal bands (CSF): positive

Diagnosis: MS (primary-progressive)

Treatment plan:

The patient received 2 courses of treatment, in the first course of stem cell treatment, we gave the patient medicines to improve his brain environment, immunosuppressors to block the development of his disease, the patient had four neural stem cells implantations by lumbar puncture, and we used a series of medications to help the stem cells to grow, and this was accompanied with daily rehabilitation training to accelerate the stem cells differentiation and the recovery of his bodily functions. In the second cycle of treatment, we used a comprehensive medication to protect the stem cells and accelerate the cells proliferation and will continue his rehabilitation training.

Therapy target: We aimed at improving the patient's mental status, anarthria, his difficulty with swallowing and choking, and to improve his ability to move his neck, pull down his muscle tone, try to improve his muscle force, and regain part of his ability to control his upper limbs, and his lower limbs so he can lift them over the bed.

Treatment results: The patient's mental status improved very much, he has natural facial expression, his movement of his eyeballs is much more flexible than before. He can speak more clearly and his swallowing ability has improved markedly. He can control his neck much better and the muscles in his four limbs are stronger than before. He can move his legs in bed smoothly. His left hand and wrist can lift over the bed and his left thumb and forefinger can move slightly. His right hand can move flatly in bed and the last three fingers of his right hand can move a little bit.

Neural system examination: he can lift his soft plate slightly, the eyeballs can move flexibly, his upper limbs can move much better, the muscle force of his upper limbs are 2+ degrees, his lower limbs are 1+ degree, tendon reflexes are normal. The muscle tone of his upper extremities is normal, and his lower extremities are still higher than normal but better than before.

Case analysis:

MS is a kind of autoimmune disease characterized by demyelination of white matter of CNS. Most patients had neural function disorder repeatedly, the disease had remission and relapse many times, and the patient's condition will deteriorate gradually. This patient was diagnosed with MS (primary-progressive), and this type of disease is difficult to get to respond to general therapy. After 2 cycles of treatment, the patient had obvious improvement. Yet during his stay in the hospital, the patient had a lung infection because of bucking and aspiration and he had a fever that greatly exhausted his energy. After the infection, the patient had deep vein thrombosis of his lower limbs, we had to limit the movement of his legs, and because of this, we could not give the patient scheduled rehabilitation training. It influenced the training plan of the functioning of his lower limbs, but we still achieved the expected goal on time. MS is acknowledged around the world as an untreatable disease, but we make every effort to block the development of the disease successfully, and the stem cells treatment is a new hope for many patients suffering from MS.