

BEIKE BIOTECHNOLOGY

Patient Case Study

Cerebral Palsy and Epilepsy

Male, 3 years old, Feb - March 2010

Background

Age: 3 years old

Sex: Male

Nationality: Brazilian

Date of Admission: February 12, 2010

Date of Discharge: March 24, 2010

Treatment Center: Bethune International Peace Hospital, Shijiazhuang, China

Diagnosis on Admission: Cerebral Palsy and Epilepsy

Condition On Admission

Patient's main diagnosis was of global development delay and intermittent seizures since birth. Upon physical examination the patient was found to be conscious but with few reactions to his environment. He was experiencing around 20 seizures of one second duration every day. He was unable to speak or communicate with others. Neurological examination showed that he had a swallowing reflex but it was very slow. He was unable to sit, turn over, walk, or stand. His neck was weak and he was unable to support his head. He had no voluntary movements in any limbs and the muscle tone was high.

Treatment Schedule

Patient received 8 umbilical cord blood-derived stem cell (UCBSC) packets by intravenous (IV) injection and lumbar puncture (LP), as per schedule below:

Number	Date	Cell Type	Delivery Method	Side Effects
1	February 18, 2010	UCBSC	IV	none reported
2	February 22, 2010	UCBSC	LP	none reported
3	February 26, 2010	UCBSC	IV	none reported
4	March 2, 2010	UCBSC	LP	none reported
5	March 5, 2010	UCBSC	IV	none reported
6	March 10, 2010	UCBSC	LP	none reported
7	March 15, 2010	UCBSC	LP	none reported
8	March 19, 2010	UCBSC	LP	none reported

Condition On Discharge

The patient had no side effects following his treatment. No improvements in the patients were noted at the time of his discharge.

Follow Up Information

Condition 3 months after treatment: The family started to notice small improvements in their son's condition. On their completed Health Evaluation Form they stated, "He is sitting better. He is sitting more time."

Condition 1 year after treatment: On the 3rd of April, 2011 the patient's family reported improvements in both his general physical condition and quality of life since he had completed the stem cell treatment one year previously. They particularly noticed improvements in his trunk control and attention span. The parents stated, "He has better control of trunk. He has more attention."

And below is a excerpt from the one year follow up survey which indicates the main areas of improvement observed by the family:

Symptom	Parents' Assessment of Improvement
Spasticity	Small improvements
Trunk muscle strength	Moderate improvements
Limb muscle strength	Moderate improvements
Head control	Moderate improvements
Range of movement	Small improvements
Involuntary movements	Not applicable
Balance	No improvements
Standing up	Small improvements
Speech (babbling in infants)	No improvements
Drooling	Not applicable
Swallowing	Small improvements
Appetite	Significant improvements

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