

BEIKE BIOTECHNOLOGY

Patient Case Study

Cerebral Palsy

Male, 3 years, June - July 2022

Summary

Diagnosis	Sex	Age	Nationality
Cerebral Palsy	Male	3 years	USA
Injections	Cell type	Admission date	Discharge date
9	UCMSC	June 12th 2022	July 4th 2022

Medical history

The patient, a male born in 2017 in California, USA was diagnosed with mild cerebral palsy (CP) on March 23, 2019, after experiencing developmental delays since infancy, including difficulties with speech and motor skills. Initially, his condition was mistaken for autism spectrum disorder, leading to therapy interventions that did not yield significant improvements. Despite therapeutic efforts, including speech and occupational therapy, his speech remained impaired. The patient's medical history reveals no significant family medical issues, except for a twin sister who did not experience developmental delays.

Condition On Admission

The patient presents with significant speech impairment, characterized by the ability to only speak 3 to 5 words. He also exhibits a lazy left eye, slow motor skills, difficulty grasping objects firmly, and inward-facing toe fingers, affecting his mobility. Despite understanding verbal commands, he struggles with writing and maintaining eye contact for extended periods. The patient finds solace in water activities and enjoys watching cartoons on his iPhone. Although he has learned some sign language for communication, his ability to articulate verbally remains severely limited. The family is hoping for improved speech and overall developmental outcomes.

Treatment Schedule

Patient received 9 packs of umbilical cord derived stem cell (UCMSC) by intravenous (IV) injection and intrathecal injection via lumbar puncture (LP), as per the schedule below:

Number	Date	Cell Type	Delivery Method	Side Effects
1	2022-06-16	UCMSC	Intrathecal Injection & Intravenous Injection	none reported
2	2022-06-20	UCMSC	Intrathecal Injection	none reported
3	2022-06-23	UCMSC	Intrathecal Injection & Intravenous Injection	none reported
4	2022-06-24	UCMSC	Intrathecal Injection	none reported
5	2022-06-30	UCMSC	Intrathecal Injection & Intravenous Injection	none reported
6	2022-07-04	UCMSC	Intrathecal Injection	none reported

Condition at discharge

The patient's stem cell treatment has shown general moderate improvements in physical condition, notably with a little more eye contact and a slightly improved quality of life, as reported by the parents. Although the doctor did not confirm improvements, the family remains satisfied with the treatment outcome. Regarding specific symptoms, there have been small improvements in balance, drooling, involuntary movements, learning disability, limb muscle strength, range of movement, spasticity, speech (babbling for infants), standing up, swallowing, and trunk muscle strength.

Symptom	Parents' Assessment of Improvement
Balance	Small improvement
Drooling	Small improvement
Involuntary movements	Small improvement
Learning disability	Small improvement
Limb muscle strength	Small improvement

Range of movement	Small improvement
Spasticity	Small improvement
Speech (babbling for infants)	Small improvement
Standing up	Small improvement
Swallowing	Small improvement
Trunk muscle strength	Small improvement

Condition 6 months after treatment

Six months after undergoing stem cell treatment, the patient has shown general moderate improvements in physical condition, with increased activity levels and a moderately improved quality of life, as reported by the parents. The patient appears more alert, follows directions, and engages in running games more frequently. However, the doctor did not confirm these improvements, yet the family remains satisfied with the treatment outcome. Notably, there have been moderate improvements in balance, learning disability, and range of movement, along with small improvements in appetite, drooling, limb muscle strength, mood disorder, spasticity, speech, swallowing, and trunk muscle strength.

Symptom	Parents' Assessment of Improvement
Balance	Moderate improvement
Learning disability	Moderate improvement
Range of movement	Moderate improvement
Appetite	Small improvement
Drooling	Small improvement
Limb muscle strength	Small improvement
Mood disorder	Small improvement
Spasticity	Small improvement
Speech (babbling for infants)	Small improvement
Swallowing	Small improvement
Trunk muscle strength	Small improvement

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