

# BEIKE BIOTECHNOLOGY

## Patient Case Study

### Ataxia

Male, 41 years old, Jan - Feb 2010

#### Background

Age: 41 years old

Sex: Male

Nationality: American

Date of Admission: January 5, 2010

Date of Discharge: February 2, 2010

Treatment Center: Shanghai Tiantan Puhua Hospital, Shanghai, China

Diagnosis on Admission: Ataxia

#### Condition On Admission

The patient's chief complaint was of weakness in all four limbs for more than 20 years. Patient first noted he had weakness in both his upper limbs in 1987, which was especially evident in his handwriting. The weakness progressively got worse over time. In 1994, he noticed he had problems walking up and down stairs and would trip over himself from time to time; an MRI confirmed a diagnosis of Ataxia. On physical assessment upon hospital admission he was found to have low muscle tone in all limbs with muscle power of 5/5. Coordination tests such as finger-to-nose and heel-to-tibia showed poor coordination and the patient was unable to walk heel-to-toe. Routine examination showed no other abnormalities.

#### Treatment Schedule

Patient received 6 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	January 8, 2010	UCBSC	IV	none reported
2	January 11, 2010	UCBSC	LP	none reported
3	January 15, 2010	UCBSC	LP	none reported
4	January 20, 2010	UCBSC	LP	none reported
5	January 25, 2010	UCBSC	LP	none reported
6	February 1, 2010	UCBSC	LP	none reported

## Condition On Discharge

The doctors observed an increase in both muscle strength and tone in all four limbs and improvements in the patient's hand writing, which was steadier than before treatment. They also noted the patient had a measured improvement in the walking heel-to-toe test and he was able to do this with a reasonable gait with some assistance. The patient himself reported gaining moderate improvements and stated, "[I am] able to stand on one foot for one minute. Able to walk up stairs with no hands. Able to walk without dragging feet."

## Follow Up Information

**Condition 1 month after treatment:** The patient reported significant improvements at one month after his treatment. He stated, "[I] can walk heel to toe, can do the balancing exercise for longer periods of time, can go up and down stairs with no hands." He also made comments about the importance of continuing to do daily exercise and how it is becoming easier but also feels that the exercises are essential to aiding his continued improvements.

**Condition 12 months after treatment:** At the 12 month follow up point the patient reported that he was satisfied with the outcome of his treatment which has improved his quality of life and given him moderate improvements overall in his physical condition.

Please see an excerpt from the patient's 12 month assessment below:

Symptom	Parents' Assessment of Improvement
Balance	Moderate improvements
Coordination	Moderate improvements
Fine hand movements	Small improvements
Tremors	Not applicable
Control of movement	Moderate improvements
Muscle stiffness	Not applicable
Speech	Moderate improvements
Walking	Moderate improvements
Fatigue	Small improvements

BEIKE BIOTECHNOLOGY CO., LTD.  
9th Floor, Zhongke Building, 1 South Street  
South Area, Shenzhen Hi-Tech Industrial Park  
Shenzhen, China 518057

Tel: +86-755-8630-9277 Email: info@beikebiotech.com  
Fax: +86-755-8630-9309 Web: www.beikebiotech.com