

# BEIKE BIOTECHNOLOGY

## Patient Case Study

### Optic Atrophy and Bilateral Optic Neuropathy Female, 24 years old, January-March 2010

#### Background

Age: 24 years old

Sex: Female

Nationality: Irish

Date of Admission: January 21, 2010

Date of Discharge: March 6, 2010

Treatment Center: Qingdao Chengyang People's Hospital, China

Diagnosis on Admission: Optic Atrophy and Bilateral Optic Neuropathy

#### Condition On Admission

Chief Complaint was of blurry vision in both eyes. Patient could not see any charts unless holding directly in front of eyes and only able to make out human figures but no facial features. Routine examination showed vision OD (right eye): 0.02 and OS (left eye): 0.02. Other assessments of the cranial nerves were normal. There were no problems in kinetic and sensation systems. Heart, lungs, and abdomen were normal.

#### Treatment Schedule

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

Number	Date	Cell Type	Delivery Method	Side Effects
1	January 27, 2010	UC-MSC	IV	none reported
2	January 29, 2010	UC-MSC	LP	none reported
3	February 3, 2010	UC-MSC	IV	none reported
4	February 8, 2010	UC-MSC	LP	none reported
5	February 12, 2010	UC-MSC	IV	none reported
6	February 19, 2010	UC-MSC	LP	none reported
7	February 24, 2010	UC-MSC	IV	none reported
8	March 1, 2010	UC-MSC	LP	none reported

## Condition On Discharge

The doctors observed and measured improvements in the patient's vision, with greater improvements in the right eye. The patient reported moderate improvements and made the following observations:

"I can now see the color red, my vision has improved so much so that on the eye charts when I first arrived in China I could see the top line from one meter which I can now see the top two lines from three meters. I can now read some menus in big print and I can see faces a lot clearer at a further distance."

## Follow Up Information

**Condition 3 months after treatment:** Moderate improvements continue although the patient reports that the rate of improvement is now starting to slow down.

**Condition 6 months after treatment:** The patient reports significant improvements and made this comment: "Much to my surprise my visual field has improved when I thought it had slowed down. My eye chart reading is 6/125 in both eyes. Which is a big improvement, I got an extra 3 letters which I couldn't get in July, and I focused and got them in September."

**Related test reports:** Visual Field Results, measured by the patients own Ophthalmologist.

Eye	Visual Field Test	Feb. 2, 2010: Pre-Treatment	June 16, 2010: 3 months post-treatment	July 4, 2010: 4 months post-treatment
Right Eye	MD (mean deficit)	-13.6	-9.29	-5.84
	PSD (Pattern Standard Deviation)	10.85	8.15	5.73
Left Eye	MD (mean deficit)	-10.77	-7.03	-6.21
	PSD (Pattern Standard Deviation)	7.33	5.85	5.54

**Related test reports:** Visual Acuity Results, measured by the patients own Ophthalmologist.

Eye	Pre-treatment	6 months post-treatment
Right Eye	0.02	0.05
Left Eye	0.02	0.05

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