

BEIKE BIOTECHNOLOGY

Patient Case Study

Leber's Congenital Amaurosis

Male, 11 years old, March - April 2010

Background

Age: 11 years old

Sex: Male

Nationality: Australian

Date of Admission: March 15, 2010

Date of Discharge: April 9, 2010

Treatment Center: Qingdao Chengyang People's Hospital, China

Diagnosis on Admission: Leber's Congenital Amaurosis

Condition On Admission

At around 5 months old the patient was observed not focusing or looking at faces and moving objects and was diagnosed with Leber's Congenital Amaurosis. Electrophysiology in 1999 showed a flat response on the electroretinogram for the left eye. On review in April 2009 he was found to have no light perception, constant horizontal nystagmus, and a sluggish papillary response to light. Ocular examination showed pale waxy discs with quite marked vessel attenuation which had not changed over the last 10 years. All vital signs and routine bloods measured on admission showed no significant abnormality, and no other physical abnormalities were detected.

Treatment Schedule

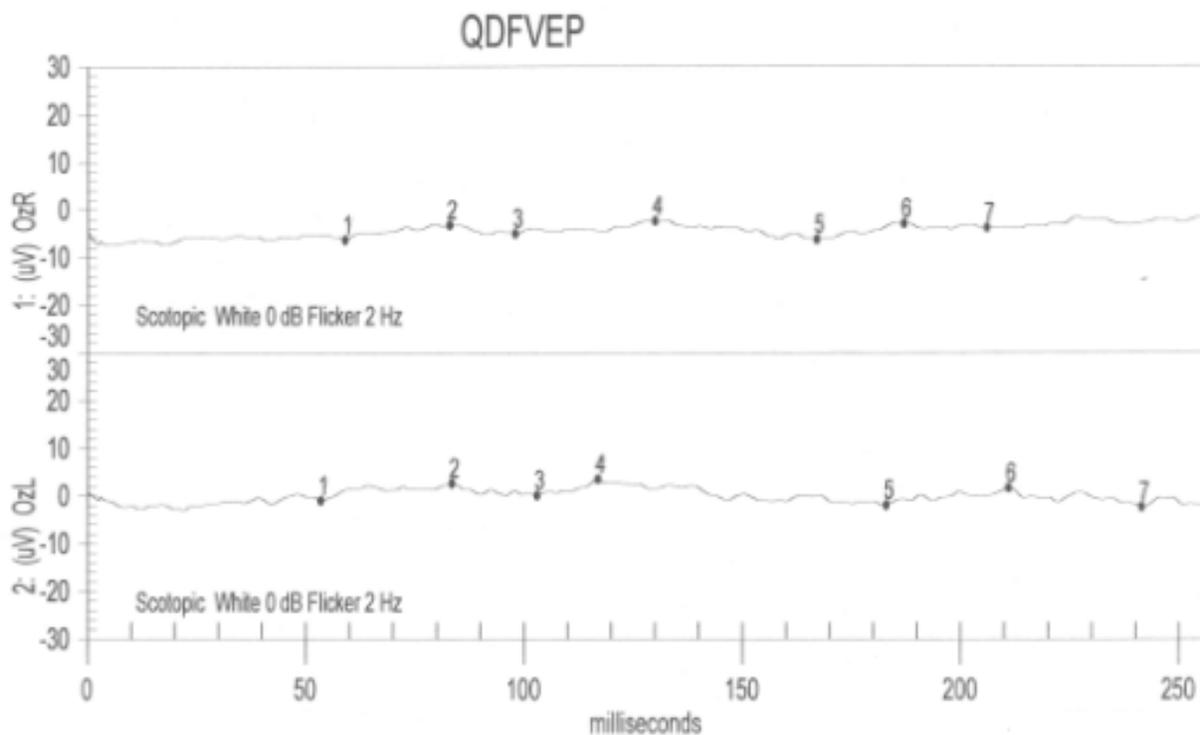
Patient received 6 umbilical cord blood-derived stem cell (UCBSC) packets by intravenous (IV) injection and lumbar puncture (LP) as per schedule below:

Number	Date	Cell Type	Delivery Method	Side Effects
1	March 17, 2010	UCBSC	IV	none reported
2	March 22, 2010	UCBSC	LP	none reported
3	March 26, 2010	UCBSC	IV	none reported
4	March 29, 2010	UCBSC	LP	none reported
5	April 2, 2010	UCBSC	IV	none reported
6	April 5, 2010	UCBSC	LP	none reported

Condition On Discharge

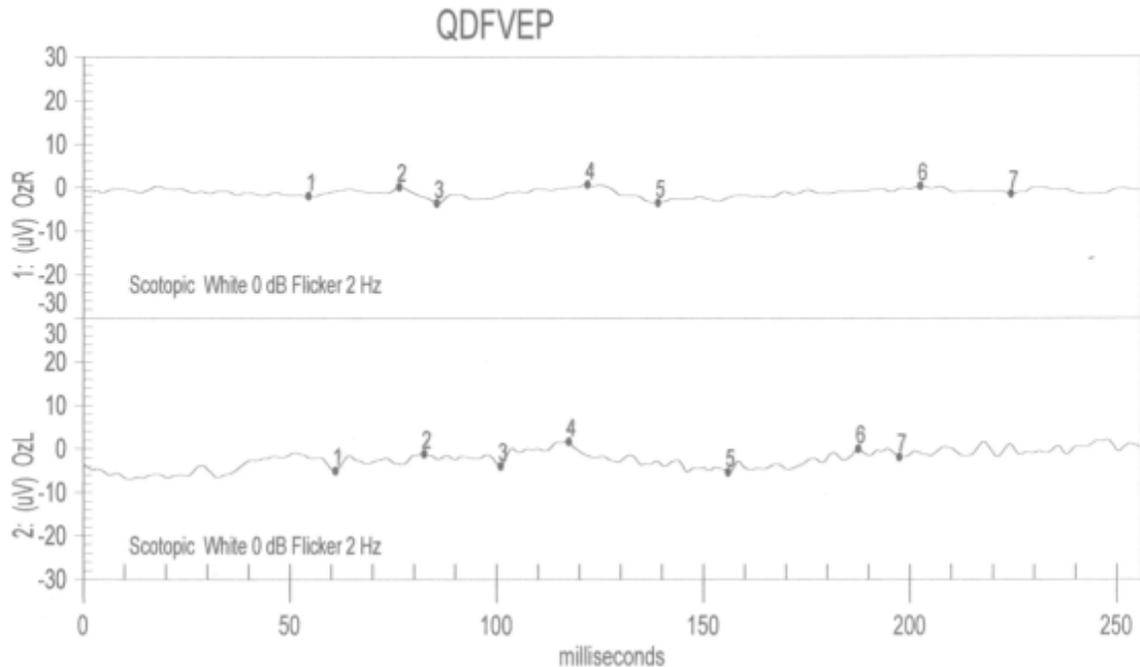
A Visual Evoked Potential test recorded after treatment on April 7, 2010 showed that latency time and amplitude of P2 were improving when compared to a VEP recorded pre-treatment on March 16, 2010. Please see the pre and post-treatment VEP reports below. The family also reported small improvements in their son's vision and believe he is starting to react to bright light.

Related test reports: VEP Pre-treatment (March 16, 2010)



	Waveform 1		Waveform 2	
Record #:	11577		11581	
Test Date:	03/16/2010		03/16/2010	
Time:	01:16 PM		01:20 PM	
Graph is:	Average 80 of 80		Average 80 of 80	
Low Cut (Hz):	1		1	
High Cut (Hz):	100		100	
Notch Filter:	ON		ON	
Backgrnd:	OFF		OFF	
	Amp.	Time	Amp.	Time
Cursor 1:	-6.4	59.0	-1.0	53.5
Cursor 2:	-3.3	83.0	2.6	83.5
Difference:	3.1	24.0	3.6	30.0
Cursor 3:	-5.1	98.0	0.1	103.0
Cursor 4:	-2.4	130.0	3.5	117.0
Difference:	2.7	32.0	3.4	18.0
Cursor 5:	-6.3	167.0	-1.9	183.0
Cursor 6:	-3.0	187.0	1.7	211.0
Difference:	3.3	20.0	3.6	28.0
Cursor 7:	-3.9	206.0	-2.3	241.5

Related test reports: VEP Post-treatment (April 7, 2010)



	Waveform 1	Waveform 2
Record #:	13234	13236
Test Date:	04/07/2010	04/07/2010
Time:	02:04 PM	02:06 PM
Graph is:	Average 80 of 80	Average 80 of 80
Low Cut (Hz):	1	1
High Cut (Hz):	100	100
Notch Filter:	ON	ON
Backgrnd:	OFF	OFF
	Amp. Time	Amp. Time
Cursor 1:	-2.0 54.5	-5.1 61.0
Cursor 2:	0.1 76.5	-1.2 82.5
Difference:	2.1 22.0	3.9 21.5
Cursor 3:	-3.7 85.5	-4.0 101.0
Cursor 4:	0.6 122.0	1.6 117.5
Difference:	4.3 36.5	5.6 16.5
Cursor 5:	-3.6 139.0	-5.4 156.0
Cursor 6:	0.3 202.5	0.0 187.5
Difference:	3.9 63.5	5.4 31.5
Cursor 7:	-1.5 224.5	-1.9 197.5

Follow Up Information

Condition 1 month after treatment: Family continues to report small improvements in vision and quality of life and report that their ophthalmologist has observed some subtle positive changes. They also feel that their son has gained in confidence and is more able to move around independently. They commented: “He has run up and down a hill independently without his cane, he has never done that before.”

Condition 3 months after treatment: The patient’s family still feels that their son is doing well and have paid the deposit for their second treatment which is planned for April 2011.

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