

BEIKE BIOTECHNOLOGY

Patient Case Study

Autism

Male, 4 years old, October 2019

Background

Age: 4 years old

Sex: Male

Nationality: Australian

Date of Admission: October 7, 2019

Date of Discharge: October 24, 2019

Treatment Location: Bangkok, Thailand

Diagnosis on Admission: Autism

Condition On Admission

The patient had problems with social communication and social interaction including deficits in non-verbal communication, deficits in developing age appropriate friendships/ relationships and deficits in emotional reciprocity.

The patient also has restricted, repetitive patterns of behaviour, interests or activities including:

- highly restricted fixated interests that are abnormal in intensity and focus,
- excessive adherence to routines, ritualised patterns of verbal or non-verbal behaviour or excessive resistance to change,
- stereotyped or repetitive speech, motor movements or use of objects
- Hyper- or hypo- reactivity to sensory input or unusual interest in sensory aspects of the environment.

Treatment Schedule

The patient received 8 umbilical cord mesenchymal stem cell (UCMSC) packets provided by intravenous (IV) way and intrathecal injections, as per the schedule below:

| Injection # | Date | Cell Type | Delivery Method | Side Effects |
|-------------|------------------|-----------|------------------|---------------|
| 1 | October 8, 2019 | UCMSC | IV | none reported |
| 2 & 3 | October 11, 2019 | UCMSC | IV + Intrathecal | none reported |
| 4 & 5 | October 14, 2019 | UCMSC | IV + Intrathecal | none reported |
| 6 & 7 | October 18, 2019 | UCMSC | IV + Intrathecal | none reported |
| 8 | October 22, 2019 | UCMSC | IV | none reported |

Follow Up Information

Condition 3 month after treatment: The patient's mother mentioned the following: *"My life as a mum has improved significantly. Our son loves playing with adults, however not with his peers....so there has been small*

improvement in terms of his peers as he now acknowledges his brother and sometimes is playful with him. He also looks at what other children are now doing (he didn't care prior to stem cell treatment). Prior to the stem cell treatment it was hard for me to have him with his brother together in the same room, now he is fine with his brother in the same room, same space, even a bit of play. Finally, before the treatment he would only sit for three minutes (max) during therapy sessions, now he does table top activities for up to an hour (with few breaks in between), he wants to learn”

Please see an excerpt from the patient's 3 month assessment below:

| Symptom | Parents' Assessment of Improvement |
|--------------------------------|------------------------------------|
| Appropriate facial expressions | Small improvements |
| Asking questions | No improvement |
| Aware of danger | Moderate improvement |
| Aware of environment | Significant improvement |
| Bed wetting | No improvement |
| Concentration | Moderate improvement |
| Cooperation with others | Moderate improvements |
| Dressing himself | No improvement |
| Expressing own needs | Small improvements |
| General conversation | No improvement |
| General mood | Significant improvement |
| Hyperactivity | Moderate improvement |
| Interaction with others | Small improvement |
| Interest in others | Moderate improvement |
| Lethargy | Moderate improvement |
| Over/under eating | Small improvement |
| Plays appropriately | Small improvement |
| Repetitive movements | Small improvement |
| Responding to commands | Significant improvement |
| Rigidity in routine | Small improvement |
| Sleep disturbance | Moderate improvement |
| Temper tantrums | Significant improvement |
| Uses eye contact | Significant improvement |
| Uses greetings | Moderate improvement |

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