MEDICAL REPORT

24 December 2018

To Whom It May Concern:

Patient name	: **ABDULLA MOHAMMED AHMED ALI ALTENEIJI**
Medical Record No.	: **AJCH-10007010**
Date of Birth	: **20/12/2006**
Nationality	: **Emirati**
Gender	: **Male**
Assessment date(s)	: **05.12.2018**

Identifying Information:

Abdulla is a 12-year-old boy who lives with his parents and five siblings in Ras Al Khaimah. His father is 52 years old and works as an assistant director. His mother is 47 years old and works as a teacher. His parents are nonconsanguineous. His brother Humaid is 26 years old, her sister Aisha is 23, his sister Maryam is 27, his sister Amani is 20, and his sister Khadija is 19. Both his sisters Maryam and Amani have delays in development, speech problems and epilepsy. There is a nanny at the house.

Abdulla currently attends therapy at Ras Al Khaimah Center for Special Needs. He goes there on a daily basis from 8 am – 12 pm. He gets Occupational Therapy in addition to Speech Therapy twice per week. Furthermore, he gets Speech Therapy with a private therapist who visits the home 4 days a week.

History of Present Concerns:

Abdulla was initially evaluated by our team in April 2018 and underwent an ADOS evaluation. He was diagnosed with Autism Spectrum Disorder with accompanying language impairment. At that time, we recommended Applied Behaviour Analysis (ABA) therapy administered by a certified ABA therapist and supervised by BCBA therapist, at least 25-30 one-on-one sessions and communicated with the family about psychoeducational assessment resources to assess the intellectual abilities of Abdulla. Abdulla had speech and language evaluation on 06.08.2018 by Ms. Suha AlShuaibat, Senior Speech and Language Pathologist.

His mother indicated that they have sought ABA, however, they did not register him at a center in Dubai since the finances were not covered.

Abdulla had an ADOS assessment recently by Mr. Hawk Kair which reflected no improvement compared to the initial ADOS assessment in April 2018. He continues to lack the ability to speak, and has significant communication deficits. He continues to engage in repetitive behaviour in the form of spinning around himself. He also does not appreciate danger and he may leave the house if he was left without supervision.

His mother indicated that in terms of activities of daily living (ADL), Abdulla can go to the bathroom, however, he would require assistance with cleaning. He also requires supervision for dressing and eating, however, he can drink from a cup. He does not write and he cannot color inside the line.

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He did not have any neurocognitive assessments in the past.

Abdulla's parents also indicated that he has snoring at night. He has been seen at the Otolaryngology Clinic and the parents were encouraged to schedule a follow-up appointment in this regard.

As per the initial assessment in April 2018: Abdulla has speech and language problems and social communication deficits. According to the report from the Khalifa Hospital, he has a diagnosis of Autism Spectrum Disorder - moderate severity, Attention Deficit Hyperactivity Disorder, language disorder severe, and moderate intellectual disability. As per the medical report from Latifa Hospital, he has inherited balanced translocation between chromosomes 3 and 16. His mother has a similar chromosomal karyotype. Based on the report from 2009, he had ear effusion in both ears, however, audiological investigation showed normal hearing threshold in both ears.

His parents indicated that Abdulla has been struggling with social communication deficits, significant delay in speech, as well as challenges with activities of daily requiring constant supervision. These challenges have been noted since an early age. He has been getting support at the Ras Al Khaimah Center for Autism since age 6 years. He has been going daily to the center from 8:00 am to 12:30 pm and he has started to get behavioral as well as speech therapy since the beginning of this academic year, 3 days per week for 45 minutes per session. He also joined the Aman Center for Rehabilitation and has been attending 2 days per week from 5 pm to 8 pm. At this center, he gets speech therapy as well as occupational therapy. His parents have noted some improvement with his fine motor skills.

In terms of his functioning, he requires supervision with dressing, going to the toilet and feeding. He has been getting assistance from a nanny who has been at the house for the past 7 years. His parents indicate that he responds to instructions to strangers better than to the parent. They also mentioned that his food intake is good. His bowel movement is normal. He sleeps well from 10 pm to 7 am.

His parents mentioned that he has obvious deficits in social emotional reciprocity. He does not engage in back and forth play or communication. He likes to be around children, however, he does not play with them. He has deficits in nonverbal communicative behavior, for instance he does not use gestures. He does not point. He pulls his parents from their hands if he wants to go out or if he wants something from the kitchen. He is noted to smile while watching TV. He also has challenges with developing or maintaining relationships. He has also been exhibiting repetitive behaviors. He also has restricted interests, for instance, electronic use as well as watching a particular TV channel by the name of Toyor Al Janah. He seems to have tactile sensitivity around exploring any electronics that have screens. He also seems to like loud voice. In addition, he seems to like the rides at theme parks.

His parents indicated that he does not have anxiety from strangers. He does not have other forms of excessive anxiety, however, they noted that he does not appreciate danger. He seems to make careless mistakes, for instance, when is asked to bring his shoes, he will get one pair and not the other. He follows instructions better at the center and he poorly follows instructions at home. He does not have the responsibility of organizing, the nanny takes care of that or his mother. He seems to do well with the structure at the center, however, he has difficulties at home in terms of engaging in positive activities.

He is noted to have an increase in his activity level at home. He tends to leave his seat at mealtime, however, at the center, he seems to be more settled. He has difficulties waiting for his turn when they go to the shopping mall, however, he is noted to be able to wait for his turn at the center.

Medical, Psychiatric and Surgical History:

He has seen ENT Specialist as per the parents, and noted to have adenoid enlargement which has been waxing and waning. This condition has been associated with mild sleep apnea.

He requires supervision, to remind him to use the bathroom, as he has been having enuresis during the day, however, there is no nocturnal enuresis.

He had surgery previously for hernia as well as tongue tie.

His parents also indicated that he was exposed to hyperbaric oxygen multiple sessions in 2015 and this was not found to be helpful.

He does not take any medication on a regular basis. He had a trial of Strattera for about one month in 2015, however, he was noted to become excessively drowsy resulting in minimal engagement at the center, so the parents decided to discontinue this medication.

The parents reported that there is no history of epilepsy, seizures, head concussion, thyroid disease or cardiac disease.

Allergies: There are no known drug allergies.

Vaccination: Up to date.

Pregnancy, Birth and Developmental History:

His mother indicated that there has not been any complications during pregnancy. He was born around the 9th month of gestation, around 36 weeks. His birth weight was around 2.2 kg. The delivery had to be induced due to the decreased amniotic fluid around that time. He did not require ICU care and his first month of life was described as uneventful. He was breastfed and bottle fed for about 2 years. He seemed to have difficulties with chewing early in life. He was also noted to engage in spinning, hand flapping, moving his head side to side whenever he was excited.

In terms of developmental milestones, he was noted to have some challenges on walking and then at around age 1½ , he had physiotherapy and that was helpful. He also had challenges with fine motor skills. His speech has been significantly delayed and currently he does not say any words. He responded to his name late and he also had delays in developing a responsive social smile. He currently has difficulties eating with a spoon. He also does not engage in any imaginative play. He likes to play with the trampoline, on the swing, and with electronics.

Family and Social History:

As mentioned above, he has two sisters with epilepsy, delays in development and speech problems.
His grandmother has high-blood pressure, diabetes and high cholesterol level.
His mother's uncle has language disorder and his mother's aunt as well.
He has a maternal cousin who has epilepsy.

From a social perspective, at the center he engages in activities. He waits for his turn and his activity level seems to be regulated.

Autism Diagnostic Observation Schedule (ADOS) on 02.04.2018

Clinical Diagnostician: Hawk Kair, Psychologist, ASD Certified Diagnostician

Abdulla is an 11 years young Emirati boy who was referred to the ASD diagnostic clinic by Dr. Meshal Sultan, Child and Adolescent Psychiatrist for ASD diagnostic assessment due to speech delay and deficits in social communication.

The ADOS 2 - Autism Diagnostic Observation Schedule 2nd edition – Module 1 Pre-Verbal/Single Words was completed and scored using the scoring algorithm for children with "Few To No Words"

Abdulla came with his parents to the clinic, however, he attended the ADOS diagnostic clinic with his nanny. Abdulla was sitting on a stroller type chair, not because he cannot walk but because his parents felt that this was better to transport him and move around with him while controlling his behaviors.

Abdulla attended the diagnostic clinic with his nanny while parents were interviewed by Dr. Meshal. He appeared very active and seemed to be very attached to the mobile phone songs and rhymes and dancing to them.

A. Language and Communication:

A1. Overall Level of Non-Echoed Spoken Language:
He had no words or word approximations used meaningfully.

A2. Frequency of Spontaneous Vocalizations Directed to Others:
He did not frequently or spontaneously direct any vocalization towards others.

A3. Intonation of Vocalizations or Verbalizations:
His language was too limited to judge this item.

A4. Immediate Echolalia:
His language was too limited to judge this item.

A5. Stereotype/Idiosyncratic Use of Words or Phrases:
His language was too limited to judge this item or any other verbal features in the assessment.

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A6. Use of Another's Body:
He did not use another's body parts to communicate because of his limited spontaneous communication.

A7. Pointing:
He did not point.

A8. Gestures:
He had some spontaneous use of gestures like covering his eyes with his arms when he is upset, especially when the phone was taken away from him.

B. Reciprocal Social Interaction:

B1. Unusual Eye Contact:
He did not have normal or usual eye contact.

B2. Response to social smile:
He did not respond to social smiling.

B3. Facial Expressions Directed to Others:
His facial expressions were limited as far as direction of appropriate facial expression towards others.

B4. Integration of Gaze and Other Behaviors during Social Overtures:
He had weak integration of gaze and other behaviours during the social overtures.

B5. Shared Enjoyment in Interaction:
He showed little expressed pleasure in interactions.

B6. Response to Name:
He had no verbal or vocal responses and limited eye immediate contact with the examiner and the nanny after his name was called.

B7. Requesting:
He did not request.

B8. Giving:
He did not give.

B9. Showing:
He did not show.

B10. Spontaneous Initiation of Joint Attention:
He had no spontaneous initiation of joint attention.

B11. Response to Joint Attention:
He exhibited weak responses to joint attention.

B12. Quality of Social Overtures:
His quality of social overtures was lacking integration into context.

B13.a. Amount of Social Overtures/Maintenance of Attention: EXAMINER/nanny:
Very limited and not sustained social overtures/maintenance of attention.

B13.b. Amount of Social Overtures/Maintenance of Attention: Parent/Care giver (nanny):
Very limited and not sustained social overtures/maintenance of attention.

B14. Quality of Social Response:
He exhibited odd and stereotyped responses.

B15. Level of Engagement:
Only present when the examiner tried hard.

B16. Overall Quality of Rapport:
One sided and unusual interaction resulting in consistently a mildly uncomfortable session, we had to go back and get the phone or give the phone back to dad before we could continue the session.

C. Play

C1. Functional Play with Objects:
Only played with some cause and effect toys but not functionally, sometimes imitated my responses - but that was very limited.

C2. Imagination/Creativity:
No imaginative or creative play.

D. Stereotyped Behaviors and Restricted Interests:

D1. Unusual Sensory Interest in Play Material:
He had some unusual sensory interests rubbing plastic blocks against his body.

D2. Hand and Finger and Other Complex Mannerisms:
Some hand and finger mannerisms.

D3. Self-Injurious Behavior:
No self-injurious behaviour.

D4. Unusually Repetitive Interest or Stereotyped Behaviors:
Some repetitive interests and stereotyped behaviour.

E. Other Abnormal Behaviors
A little hyperactive, a little anxious. some tantrums where he resisted engaging without the phone, but then he was okay.

Summary:
Abdulla came to the room with the phone and we forgot to give the phone back to his dad which caused him to resist engaging in any of the activities in the free play but then after we went and gave the phone back to his dad, he was partially participating with multiple prompts by me and the nanny. He again was rubbing plastic shape blocks against his body. His response to name was weak. Not responding to the examiner or the nanny. Did not respond to joint attention. Bubble play was very subtle, where he did not really participate very well in that. He did not respond to social smiles, did not respond to anticipation of social routines neither to birthday party and snack time was basically drinks and he did not request, he only took the bottle when it was offered to him.

When each of these items is scored using the standardized ADOS-2 comparison and conversion table, the Diagnostic algorithm scores were as follows:

Social Affect (SA) Score:	**19**
Restricted and Repetitive Behavior (RRB) Score	**3**
Overall Total ADOS score (AS + RRB)	**22**
(Autism Spectrum Disorder cut-off =	**8)**

Which classifies him at the **moderate ASD symptoms' Level** according to ADOS and as an overall diagnosis.

FOLLOWUP Autism Diagnostic Observation Schedule (ADOS-2) on 05.12.2018

Clinician: Hawk M. Kair M.S. ASD Psychologist- Certified ASD Clinical Diagnostician

The ADOS-2 is an observational schedule designed to measure behavioural responses, communication and communicative intent in relation to communication, reciprocal social interactions and repetitive or stereotyped behaviours. The ADOS-2 schedule is designed to provide a basis for diagnosis of presentations of autism. It also provides a framework for the collection of information relating to more broadly defined autism spectrum disorders features and symptoms. ADOS-2 scores are summed to derive a total that is compared to cut-off points for autism or ASD and a 'Comparison Score', which places the individual in a severity 'band' from low through moderate to high. One of five modules is administered depending on the individual's age and expressive language ability. In ADOS-2, the scores are derived and calculated slightly differently according to how many words are used by the participant during the administration

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ADOS -2 Module 1 Pre-Verbal/Single Words

Abdulla was assessed using the ADOS-2 Module 1 – Pre-Verbal/Single Words by Hawk M. Kair M.S. ASD Psychologist, certified ASD clinical diagnostician DHCA License # AH 1865-17. The ADOS 2 diagnostic assessment results were scored using the "Few to No Words Algorithm".

The session lasted for one hour. Abdulla's engagement and behavior were stable throughout the testing session. He did try to leave the room several times, nevertheless, the ASD diagnostic consult was conducted successfully and covered all domains and items represented by the ADOS -2 module 1 algorithmic criteria for Abdulla's ASD clinical diagnostic classification.

Abdulla entered the room with his mother and his nanny, started by organizing the toys, picking the toys off the cushions on the floor and trying to put them up all on the table. He was sniffing the texture blocks, playing with the phone, lying on the floor sometimes and then mouthing the phone. He did all these while he was hyperventilating the whole time, breathing hard and making "ma…ahh…." sound.
In response to name, he responded after the second attempt by looking at the examiner and for the first attempt by looking at his mom. He was dropping to the floor on the cushions during that time.
In response to joint attention, he was looking at "look at and point" and smiling and trying to touch the bunny during the response to joint attention.
Bubble play, he had poor eye shift and head direction. He was trying to touch the bubbles and making the ahh..ahh….ahh sound, hyperventilating the whole time and trying to hold the examiner's hand.
In anticipation of social routine, he tried to grab the balloon on a couple of times, but he was doing the same routine of hyperventilating and making the sounds. No eye contact during that time.
Response to social smile, he had partial smile when he was tickled only during the social routine anticipation.
Functional and symbolic imitation play, he did not participate in functional play or in pretend play throughout the assessment, he was prompted to do so, but he did not really show interest. Did not participate in the birthday party either.
In the snack time, he did not make a choice. He picked two biscuits and just put them in his mouth after he sniffed them and smiled.

Language and Communication
This domain considers the way in which a child interacts with others, in particular the way in which language is used for social purposes. This area includes behaviors such as gestures, pointing, intonation, immediate echolalia and overall level of non-echoed spoken language.

He had no word at all or word approximations. His vocalizations never appeared to be directed, always the ma..ahh…ahh… sound that was undirected. He had insufficient vocalizations to judge any intonation qualities to his speech. Again his vocal and verbal skills were too limited to judge any immediate echolalia issues. Stereotyped idiosyncratic use of words, also the speech level was too limited to judge this item. He did not use another's body to communicate. Because of little or no spontaneous communication, does not point to as a way of communicating intent, need or request. He has no spontaneous use of descriptive or conventional gestures.

Reciprocal Social Interaction
This domain considers the way in which the child interacts with others in a social context. This includes the ability to initiate contact with others with verbal and non-verbal communication, such as through the use of eye contact, facial expressions, sharing enjoyment, response to name, requesting, giving, showing joint attention, amount and quality of social overtures with both parent and examiner and rapport and level of engagement.

Abdulla exhibited poor eye contact, delayed and partial smile in reaction to tickling only. He did not direct appropriate facial expressions to others and as far as integration of eye gaze with other behaviour during social overture, he used either eye contact very poorly or other strategies like vocalization that was undirected.
In shared enjoyment in interaction, he had shown little or no expressed pleasure during the ADOS. In response to name, he would look towards the parent or the examiner after first or second attempt. In requesting, he did not direct a request using any of the verbal or gestural modalities. He rarely or never gave objects to others. He did not show objects to another person. He had no approximations or spontaneous initiation of joint attention. His response to joint attention was limited where he did not follow the examiner's gaze or pointing. His quality of social overtures in general lacked integration into context. The amount of maintenance of attention with examiner and the parents was occasional and very limited. He exhibited stereotyped responses as well as low quality of social response and low level of engagement where he only engaged when the examiner tried hard to get him to engage.

Play
Functional play with objects, he played appropriately with cause and effect toys in a very limited manner.
Did not exhibit any imaginative or creative play.

Stereotyped Behaviors and Restricted Interests
He had sniffing and mouthing items like the texture blocks and sniffing other toys.
No hand and finger or body mannerisms. No self-injurious behaviour or unusually repetitive interest or stereotyped behaviour
A little overactive, a little anxious, and no tantrums.

ADOS Classification
The ADOS 2 Module 1 algorithm addresses social affect through communication, reciprocal social interaction, and restricted and repetitive behaviors. The algorithm is based on DSM-5 criteria for autism. Autism is diagnosed if the child is at or above cut-off on social affect through communication, reciprocal social interaction, and restricted and repetitive behaviors. The ADOS algorithm also has the propensity to suggest a diagnosis of autism spectrum disorders.

ADOS classification: Autism

As with the ADI-R, the ADOS classification indicates whether the child shows difficulties of a type that may indicate autism spectrum disorder. Abdulla's current ADOS 2 Module 1 assessment results indicate difficulties in the two areas of autism spectrum disorder to an extent that would indicate likely ASD.

When each of the ADOS items was scored using the standardized ADOS-2 comparison and conversion table, the Diagnostic algorithm scores were as follows:
Social Affect (SA) Score: 20
Restricted and Repetitive Behavior (RRB) Score 1
Overall Total ADOS score (AS + RRB) 21
(Autism Spectrum Disorder cut-off: = 8)

Which classifies him on the **moderate ASD classification** for the ADOS and overall diagnosis of moderate level of ASD symptoms.

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Speech and Language assessment 06/08/2018 by Ms. Suha AlShuaibat, Senior Speech and Language Pathologist

Reason for Referral:
Abdulla was referred for a speech and language assessment by Dr. Meshal Sultan (Child and Adolescence psychiatrist) due to concerns about:

- Nonverbal child with no AAC.

Behavioral Observations:
Abdulla was arrived to the speech clinic on a chair with wheels, mother reported that Abdulla refuses to walk and has difficulties in transitions thus he is using the chair, Abdulla was upset when arrived the speech clinic and indicated that he wants to leave the room.

Back ground information
Abdulla is 11 years old boy who is diagnosed with ASD and currently enrolled in RAK center for people of determination, mother reported that therapy started at the age of 6 but his progress is very slow.
Speech therapy is scheduled twice weekly, family reported that Abdulla has no words or word approximations and does not use any other mean of communication.
Abdulla was reported to be fully dependent on the parents and nanny to help him with ADL.

Assessment
Abdulla was not tested using Standardized assessment tool due to noncompliance but unstructured observation revealed that Abdulla has no words or word approximations, he follows few simple instructions with visual and verbal cues.
Abdulla uses pulling and shouting to communicate his wants and needs to communication partners.

Impressions:

- Abdulla presents with a severe expressive and receptive language delay. These delays include limited expressive and receptive vocabulary, inability to follow age-expected directives, and limited use of utterances to make his wants and needs known to others.

Speech Evaluation Recommendations:

- Alternative Augmentative Communication –AAC- is strongly recommended to enable Abdulla to communicate his needs.
- PECS / Proloque2GO is highly recommended as an alternative mean of communication.
- ABA therapy with ABA certifies therapist and BCaBA/BCBA licensed therapist for supervision purposes.

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Diagnoses:

1. Autism Spectrum Disorder.

2. Language disorder.

3. Possible ADHD.

Impression:

Abdulla is a 12-year-old boy with the diagnosis of Autism Spectrum Disorder with accompanying language impairment. He presented with challenges since an early age around social communication, speech and language delays, as well as hyperactivity. He is also dependent on others for activities of daily living. He has a family history of neurodevelopmental conditions which increases his risks of developing his current challenges. He also had a low birth weight, which also has possibly increased his risk of developing his current difficulties.

Abdulla and his family require substantial support in the context of the complexity of his condition as well as the presence of two other siblings with severe developmental delay.

Recommendations:

- Education was provided about the role of and evidence on ABA for social communication deficits. Abdulla will require at least 25-30 one-on-one sessions of ABA weekly, by a certified therapist under supervision of a BCBA certified behavior analyst.
- In terms of the current therapy, the parents were encouraged to communicate with the center in order for the parents to learn about the strategies that are being implemented and to generalize these at home.
- Parents were also encouraged to share the medical report from Al Jalila Children's with the Center.
- Further emphasis on activities of daily living as well as basic vocational skills will be helpful.
- The parents were encouraged to provide opportunities for social interaction and limit screen time.
- Education was provided about the role of medication and that there is no medication approved for the core symptoms of autism, however, medications can help with symptoms that may be comorbid for instance hyperactivity, irritability or sleep disturbance.
- Regarding his snoring at night, the parents were encouraged to schedule a follow-up appointment with Otolaryngology clinic.

- Follow up appointment with Dr. Meshal Sultan and Mr. Hawk Kair has been scheduled for March 11th at 1:00 PM.

This medical report is issued as per parent/guardian's request and information is correct as of the date of report.

Dr. Meshal Sultan
MBBS,FRCPC
Child and Adolescent Psychiatrist
License No. MS1727-17
Al Jalila Children's Specialty Hospital

Dr. Meshal Sultan, MBBS, FRCPC
Child and Adolescent Psychiatrist
Mental Health Center of Excellence
Al Jalila Children's Specialty Hospital
Phone: 00971 4 281 1000

Hawk Kair
Allied – Counselor
License No. AH1805
Al Jalila Children's Specialty Hospital

Hawk Kair, M.S.
Autism Psychologist
Mental Health Center of Excellence
Al Jalila Children's Specialty Hospital
Phone: 00971 4 281 1000

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Al Jalila Children's Specialty Hospital
الجليلة للأطفال المستشفى التخصصي
PO Box 7662 Dubai - United Arab Emirates

Suha Al-Shuaibat
Speech and Language Pathologist
Mental Health Center of Excellence
Al Jalila Children's Specialty Hospital
Phone: 00971 4 281 1000