



Autism Spectrum Disorder (ASD)

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Received Date: January 10, 2020; **Published Date:** January 18, 2020

Abstract

Autism, or autism spectrum disorder (ASD), refers to a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication. We know that there is not one autism but many subtypes, most influenced by a combination of genetic and environmental factors. Because autism is a spectrum disorder, each person with autism has a distinct set of strengths and challenges. The ways in which people with autism learn, think and problem-solve can range from highly skilled to severely challenged. Some people with ASD may require significant support in their daily lives, while others may need less support and, in some cases, live entirely independently.

Several factors may influence the development of autism, and it is often accompanied by sensory sensitivities and medical issues such as gastrointestinal (GI) disorders, seizures or sleep disorders, as well as mental health challenges such as anxiety, depression and attention issues. Indicators of autism usually appear by age 2 or 3. Some associated development delays can appear even earlier, and often, it can be diagnosed as early as 18 months. Research shows that early intervention leads to positive outcomes later in life for people with autism.

Keywords: Autism; Autism spectrum disorder; Gastrointestinal; Communication disorder

Abbreviations: ASD: Autism Spectrum Disorder; GI: Gastrointestinal; CD: Communication Disorder; ADHD: Attention Deficit Hyperactivity Disorder.

Introduction

A 2 years 6 months old child, resident of UAE was referred to us for dietary counseling. He had minimal or no intake of food. A well-defined interview with his parents was done and the diagnosis of autism was made. Our evaluations indicated that he has communication disorder (CD), attention deficit hyperactivity disorder (ADHD) and deficit in social communication and social behavior was found as well.

Case Presentation

The child was second child of his parents and they reported

that Rayaan started saying few words when he was 18 months old. At around 24 months, a regression was indicated whereby he stopped using speech sounds altogether. At the time of evaluation, he didn't utter words. He expresses his needs through crying or pulling the adult towards the object of desire. Ability to sustain eye contact has improved and is better with significant people. Response to his name when called is inconsistent. Poor interest in toys and tendency to be on his own most of the time is indicated. He doesn't interact with his elder sibling and tends to touch the cheek of his younger sibling when he feels like. He is described as a restless child. He finds it difficult to remain seated for a period of time and tends to move around aimlessly. Temper tantrums in form of aggression towards significant people are indicated at the home front when demands are not met. He is fussy with food and dislikes having his hair cut. Birth history

is uneventful. Motor milestones were normal. He is mostly dependent for his self-help skills and is not toilet trained. A routine is yet to be followed at home [1].

Discussion

Vineland Social Maturity Scale(VSMS)

This scale provides a definite outline of detailed performances with respect to which children show a progressive capacity for looking after themselves and for participating in those activities which lead toward ultimate independence as adults. The items of the scale are arranged in order of increasing average difficulty and represent progressive maturation in self-help, self-direction, locomotion, occupation, communication and social relations. This maturation in social independence may be taken as a measure of progressive development in social competence. Information was gathered through semi structured interview with the parents and through informal interaction with Rayaana. A social quotient of 38 indicated a social age of 1 year [2].

Wechsler's Preschool and Primary Scale of Intelligence(WPPSI)

Wechsler Preschool and Primary Scale of Intelligence is administered individually to assess the cognitive ability of a child. It provides a measure of general intellectual ability, which is obtained from three composite scores: Verbal Comprehension Index (VCI), Visual Spatial Index (VSI) and Working Memory Index (WMI) that represent functioning in specific cognitive domains.

Rayaana was not able to perform on the test.

Washington Scale for Preschool Children

This informal screening tool was used to get a more detailed understanding of Rayaana's readiness skills in various areas of development.

Gross motor skills: Rayaana was able to walk forward/backward, pick up objects without falling, pull a toy, seat self in a chair, walks the stairs and run, Difficulty with further age appropriate tasks including jumping with 2 feet together, standing on one foot with aid, walking on tip toe and kicking a ball.

His functioning age is around 2 years.

Fine motor skills: Rayaana was able to pick up things with pincer grasp, transfer objects from one hand to another and drop and pick up toys. He attempted to build a tower with two block cubes and put rings on a stick. Difficulty with further age appropriate tasks including turning pages (2-3 pages at a time), stringing large beads, scribbling and snipping with scissors were indicated.

He functions in the age range of 1 year- 1 year 3 months.

Pre-Academic skills: Rayaana was able to track objects with eyes, find objects under a cup, put blocks under a cup and attempt to complete 2 pieces from board. Difficulty with rather age appropriate task including imitating gesture, pointing to basically body parts, toys and significant people and matching similar objects (picture cards) and colours were indicated.

His functioning age is below 1 year.

Social and play skills: Rayaana was not able to respond to his name even though it is called (even if it is by the significant person) or smile spontaneously. eye contact was fleeting (even with significant people). Poor interest in toys was observed. He attempted to work on tasks (with the physical assistance or instructor) or a brief period and tended to lose interest. He tended to observe few toys (for a short period). He pulled the instructor and attempted to move out of the area he was placed.

His functioning age is below 1 year.

- Oral/Understanding Language

Rayaana responded to (few)single step directions (with gesture/physical prompts). He attempted to utter words which was unintelligible. Further age appropriate oral and receptive language task was indicated to be difficult.

His functioning age is below 1 year.

Note: All the above assessments were conducted in his mother tongue.

Observation during Assessment

- Restless and fidgety
- Tends to move around aimlessly
- Takes time to settle in setting
- Persistent crying spells
- Tendency to lie on the floor, push the instructor
- High inconsistency in responding to name when called
- Fleeting eye contact
- Poor interest in toys
- Smile lack spontaneity
- Nil verbal response
- Comprehends (few) single step instructions when accompanied with gesture/physical prompts
- Needs firm and clear instructions with adult 'in charge' for better compliance
- Needs intensive training

Summary

Evaluations indicate

- Communications Disorders (CD)
- Deficits in Social Communication and Social Behavior
- Attention Deficit Hyperactivity Disorder (ADHD)

Recommendations

- Parents need to be aware of child genuine difficulties
- Parents are to compulsory involve him with training at home
- Behavior modification techniques (to improve 'adhering to commands' Attention/concentration, sitting tolerance, social communication, and social behavior) to be followed. (The parents have been counselled regarding it).
- ABA/speech and language therapy needs to be initiated.
- Occupational therapy to aid development of fine motor skills and attention span and tackle sensory issues.
- Regular sessions to enhance preschool learning.
- Play school placement need to be considered
- Support from his play school teacher is highly appreciated
- Firm instructions, with the teacher 'in charge'.
- Individual attention for better participation in classroom activities.
- Constructive social interaction could be encouraged to enhance his social skills.
- Periodic evaluation of the child profile is recommended to monitor progress.

Dietary Counseling

He was sent to the dietitian OPD for his nutritional counseling. According to the Autism Network, nearly one in five children

with autism is on a special diet. There is no specific ASD diet, but removing certain proteins may relieve symptoms. The gluten-free, casein-free (GFCF) diet has the most research and is one of the most common dietary interventions. This diet may be recommended to help improve behaviour in autistic children. For the first time, scientists have found a molecular connection between a common food preservative, neuronal disruption, and autism spectrum disorder. The findings suggest that there may be a link between the consumption of processed foods during pregnancy and the rise of autism. The dietitian also suggested her mother to avoid giving processed foods to him now at least.

Conclusion

After the first counseling session, the started giving fresh fruit juices and whole fruits to the child. In his follow-up session, the mother told the dietitian that he has started asking for healthy food rather than junk foods. He was visited by the dietitian daily to check his intake progress until he was admitted in the hospital.

References

1. What is Autism?
2. Data & Statistics on Autism Spectrum Disorder.