

Diagnosis and Management of a 7-year Old Child with an Autism Spectrum Disorder (ASD) in Bahrain: A Case Study

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Abstract

Autism Spectrum Disorders (ASDs) are a group of neurodevelopmental disorders characterized by impairments in 3 domains: communication, social interaction and repetitive behaviours. It is typically diagnosed by 2-3 years of age. This paper presents a case that received late diagnosis of an ASD, and discusses the procedures in which ASDs are diagnosed and managed in Bahrain. It also addresses the challenges faced by healthcare professionals and families in that field. Several factors contributed to the late diagnosis of this child, and that resulted in delayed access to early intervention centers. The options, on the other hand, are very limited due to the shortage of such centers.

Keywords: Autism, Delayed diagnosis, Bahrain.

Introduction:

Autism spectrum disorders (ASDs) are a group of neurodevelopmental disorders characterized by impairments in three domains: social interactions, verbal and non-verbal communication, and preference for a repetitive interest or behavior.¹ There are three types of disorders classified under the Autism Spectrum Disorders according to the DSM-IV-TR: Autistic disorder, Asperger's disorder and Pervasive Developmental Disorder Not Otherwise Specified (PPD-NOS). Autistic disorder is further classified according to its severity to mild, moderate and severe. The Center for Disease Control and Prevention (CDC) estimates that about 1 in 88 children has been identified with an autism spectrum disorder (ASD) in the United States.² In this paper, the terms Autism and Autism Spectrum Disorders (ASDs) are used interchangeably.

It has been found that diagnosing autism between ages 2 and 3 years is quite reliable when healthcare professionals interpreted standard criteria for autism. However, many children do not receive their diagnosis until much later.³ The importance of early diagnosis lies in the outcomes of early access of appropriate services and early intervention. Research found that preschool children

with more than 2 years of intervention for an ASD performed much better than children who began the same interventions at older age. Those improvements included increases in developmental progress and intellectual performance.⁴

One of the most notable interventions is Applied Behaviour Analysis (ABA). It is an intensive behavioral program that incorporates the concepts of Operant conditioning through the use of reward system in behavioral modification. Other interventions include TEACCH and Picture Exchange Communication System (PECS) in which visual cues are utilised in educational settings. Moreover, children with autism may benefit from occupational therapy, physiotherapy and sensory integration therapy. Some complementary and alternative treatments may offer biological therapies, diets, or chelation for the children, however, there is no evidence regarding the benefit of such interventions. There are no medications to cure autism or treat its symptoms.⁵

Although it is estimated that the prevalence of ASDs in Bahrain is equivalent to the general prevalence of ASDs worldwide, there is no documented epidemiological data to support this estimation. The stigma surrounding the disorder and lack of awareness could have contributed to

the underdiagnosis or late referral of ASDs in the population.⁶ ASDs are mainly diagnosed through the Salmaniya Psychiatric hospital in Bahrain, and the cases are usually brought either through self-referral (parents), private practice or sometimes pediatrics.⁷

This paper presents a patient who received a late diagnosis of an ASD, and discusses the process in which Autism Spectrum Disorders (ASDs) are diagnosed in Bahrain, and the challenges faced by the healthcare sector and community in that field.

Case Description:

A 7-year old Bahraini boy was referred from school due to his poor attention and abnormal behavior. He was reported to be constantly fidgeting, not following instructions and hiding under the desk. He, however, was able to understand lessons and gave correct answers.

The patient is a product of full-term normal vaginal delivery and had normal developmental milestones. He walked at less than one year old, and spoke his first words at 1.2 years old. There were complaints in kindergarten that he didn't mix with other children as he was noted to be alone, and was unable to engage in pretend games. In addition, he tended to repeat after people and flickered with his fingers. The family history was positive for ADHD.

On examination, the child had minimal facial expression, poor eye-eye contact, no social smiling, and was flickering with fingers. He appeared with average dressing and hygiene. When asked questions, he didn't answer any except for his name. He was either quiet or repeated the question after the doctor (echolalia). No significant medical findings noted.

Methods:

Several tools have been used in order to obtain a diagnosis of an ASD in the patient. Those will be described briefly.

1. The Modified Checklist for Autism in Toddlers (M-CHAT); a questionnaire given to the parents and is used as a screening method for children suspected to have an ASD.
2. The DSM IV-TR provides specific criteria for diagnosing each of the three disorders.⁸ This is done

through taking the patient's history in addition to the doctor's own observation.

3. The Autism Diagnostic Observation Schedule (ADOS); is a semi-structured assessment that measures the child's performance in terms of communication, socialization and play.⁹
4. The Childhood Autism Rating Scale (CARS); is a diagnostic tool that was developed to help differentiate children with Autism from those with other developmental delays. It yields a score ranging from non-autistic to mildly autistic, moderately autistic, or severely autistic.¹⁰
5. Wechsler Intelligence Scale for Children- Revised (WISC-R); is an intelligence test for children aged 6-16 years of age. It generates an IQ score that reflects the child's cognitive ability.¹¹
6. Adaptive Behaviour Scale (ABS): This test is equivalent Vineland Adaptive Behaviour Scale but was modified to suit the Bahraini culture. It measures the child's skills in terms of daily activities and independence.

Management:

The M-CHAT screening questionnaire was carried out through interviewing the parents, and a score of 5 was obtained. However, it was repeated at a later stage through re-taking the history from the parents in addition to the doctor's own observation. At this point, the patient received a score of 15 which means he is at elevated risk for ASD. With the DSM IV- TR, he fulfilled 9 of the criteria for diagnosing Autism (a score of 6 is diagnostic). He was advised to be admitted for further evaluation to confirm the diagnosis of ASD.

When he was admitted to the children's ward, he was found to be constantly blinking his eyes, covering his ears, flickering with fingers, fidgety and inattentive. He distracted other children and hid under the table. When talking, he occasionally mixed pronouns and had grammatical errors but was able to give good feedback. He had poor eye contact and minimal facial expression. During play, he didn't participate with the other children and was mouthing the toys and sensing them with his lips. He, however, enjoyed engaging in puzzles and was competent in them.

On the fourth day of admission, an IQ test (WISC-R) was carried out. However, the patient was uncooperative and the doctor advised that the test is to be repeated at a later appointment. The doctor conducted ADOS, and the score revealed that the patient hit the cut-off point for Autism. CARS was done and yielded a diagnosis of moderate Autistic disorder. As for the Adaptive Behaviour Scale (ABS), his performance indicated mild intellectual disability. The patient was discharged after the diagnosis was confirmed, and an appointment was booked to redo the IQ test, and to discuss the diagnosis with the parents. When the WISC-R test was repeated, the performance scale part was only administered. He obtained an IQ of 82 which placed him at the low average category.

Discussion:

Autism Spectrum Disorders (ASD) are a complex group of disorders that require a precise and comprehensive assessment in order to be diagnosed accurately. Similar to other psychiatric disorders, the diagnosis cannot be established through physical examination or lab finding. On the contrary, it requires a detailed history taking from the family and an adequate observation period from healthcare workers.

When the history was taken from the parents at the first appointment, they seemed to be very defensive and in a denial state. They had given different answers to the same question at times, and overall, they provided a poor history. Hence the low score that was first obtained from the M-CHAT. On the other hand, in later appointments, the parents began to accept the possible diagnosis of autism and were more cooperative. The doctor also had enough time to observe the child and base the answers of the M-CHAT on both her observation and the parents' report.

Usually, the parents present with concerns when the child is around 2 or 3 years of age. Their main concern would be lack or delayed speech. In this case, however, the patient developed some speech although very minimal and basic, and his non-verbal cognitive abilities were in the average range. The parents were obviously in denial, and refused to believe that their child had any problem. Therefore, it wasn't until the child went to school that he was referred to the department.

Limitations:

Many challenges hinder the diagnosis of ASDs, particularly, the individual characteristics that distinguish each child. For example, two patients may be diagnosed with moderate autistic disorder while each of them has a completely different set of features. Therefore, it is important to have a structured and objective tool to evaluate each patient individually. This means that to have an accurate diagnosis, the evaluation must be entirely focused on the patient, and must provide adequate time to assess his/her behaviour accurately.

There is a very long list of patients waiting to be evaluated for the diagnosis of ASDs in Bahrain. This is not only contributing to the anxiety experience by families, but is also resulting in a delay in accessing therapy and early intervention centers.

Unfortunately, the autism dilemma doesn't end when a diagnosis is obtained. The psychiatric hospital follows the Canadian guidelines for diagnosing ASD¹², and can provide excellent diagnostic services. Yet, there are a very few early intervention centers specialized in autism in this country. Many of which lack specialized therapists, and in which the child: teacher ratio greatly outnumbers the ratio of 1:1. This environment will negatively impact the progress of the child and his/her potentials. In addition, the minority of early intervention centers that provide evidence-based programs have very long waiting lists and cannot be afforded by the average Bahraini citizen.

Recommendations:

There's an urgent need to either expand the facilities of the Child and Adolescent Psychiatry department, or provide another institute with trained professionals capable of diagnosing ASD among the community (For example, through developmental behavioral pediatricians). After solving this issue, it will be reasonable to start training primary health care professionals in screening and detecting ASD in the population.

In addition, many of the early intervention centers in Bahrain face a difficulty in recruiting more staff and training them while maintaining a low tuition fee for the

families. The government must at least provide financial aid to the centers and take the responsibility of improving them. It must also train locals in the field of autism therapy to be competent and experts instead of recruiting specialists from abroad.

Community-wise, it is extremely important to educate future families about autism and how to detect it early. On the other hand, families with children with autism need to be further educated about the disorder, how to manage it and how to cope with it under the resources available here and abroad. Support groups for the families might be of great benefit. There are numerous misconceptions among the community, and these particularly need to be addressed while explaining the complexity and individuality of the disorder. Through educating the community, we must aim to tackle the stigma surrounding the disorder and help dissolve the denial many families suffer from.

Conclusion:

The delayed diagnosis of ASDs in children imposes negative impacts on the outcome. Many studies showed that early diagnosis, and consequently early intervention results in better outcomes for the patient.^{4,13} One research found that improvements in young children with ASDs were more rapid than other young children with other severe neurodevelopmental disorders.⁴ Therefore, it is critical to highlight this importance to provide better diagnostic and intervention facilities in the country. Finally, there's a need for further research about ASD in this region, especially about the epidemiology, diagnosis and effectiveness of the early intervention centers currently available.

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