EDITORIAL

AUTISM SPECTRUM DISORDER

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Autism spectrum disorder (ASD) is a heterogeneous neurodevelopmental disorder that affects communication and behavior. Although autism can be diagnosed at any age, it is said to be a "developmental disorder" because symptoms generally appear in the first three years of life. The worldwide population prevalence is about 1%. Autism affects more male than female individuals, and comorbidity is common (>70% have concurrent conditions).[1] In a large, nationwide population-based study, the estimated ASD prevalence was 2.47% among US children and adolescents in 2014-2016.[2] One important landmark survey conducted by the DGHS and MOHFW entitled Survey of Autism and Neurodevelopmental Disorders in Bangladesh in 2013, suggested the mean prevalence of ASD in Bangladesh was 1.55/1000 (n=7280) and in Dhaka city it was 30/1000 and 0.68/1000 in rural populations.[3] In India one study showed a prevalence rate of 0.9/1000 while another study reported 1.5/1000.[4] Every year 2 April is observed as World Autism Awareness Day recognized by WHO from 2008. Awareness ribbon of autism is consist of multicolor puzzle pieces as Individuals with autism are so puzzling. Blue is the color of autism awareness.

In 1943, child psychiatrist Leo Kanner first described autism in eleven children. Leo Kanner begins his landmark in 1943 by his case series on autistic children, but stating that this condition was first brought to his attention in 1938.[5]

ASD encompasses disorders previously referred to as early infantile autism, childhood autism, Kanner autism, high functioning autism, atypical autism, Asperger disorder, childhood disintegrative disorder and pervasive developmental disorder not otherwise speciûed. These speciûc diagnoses are not reliably distinguishable or consistently applied across diûerent treatment centers. There is wide variation in the type and severity of symptoms. Then autism is known as a " autism spectrum disorder (ASD)" according to Diagnostic and Statistical Manual of Mental Disorders (DSM-V) published by the American Psychiatric Association in 2013.[6] Now this single term covers a large spectrum of symptoms, skills, and levels of impairment. The diagnostic criteria for autism spectrum disorder (ASD) have been modified in DSM-V based on the research literature and clinical experience in the 19 years since the DSM-IV was published in 1994. Changes include, the diagnosis will be called Autism Spectrum Disorder (DSM-V), and there no longer will be sub diagnoses (DSM-IV). Symptoms were divided into three areas (social reciprocity, communicative intent, restricted and repetitive behaviors) in DSM-IV. The new diagnostic criteria have been rearranged into two areas: i) social communication/interaction, and ii) restricted and repetitive behaviors. The diagnosis will be based on symptoms previously, currently symptoms or by history, in above two areas.[6]

For early diagnosis RED FLAG signs are to be observed e.g. no big smiles or other warm, joyful expressions by six months or thereafter, no back and forth sharing of sounds, smiles or other facial expressions by nine months, no bubling by 12 months, no back and forth gestures such as pointing showing, reaching or waving by 12 months, no word by 16 months, no meaningful, two-word phrases (not including imitating or repeatating) by 24 months and any loss of speech, babbling or social skills at any age.[7]

Though people with ASD experience many challenges, they may also have many strengths, including being able to learn things in detail and remember information for long periods of time, being strong visual and auditory learners, excelling in math, science, music and art. High-functioning autism is not an official medical diagnosis. It's often used to refer to people with autism spectrum disorder who read, write, speak, and manage life skills without much assistance. High-functioning autism is often used to refer to those on the milder end of the spectrum.

While scientists don't know the exact causes of ASD, research suggests that genes can act together with influences from the environment. Some risk factors include sibling with ASD, older parents, very low birth weight, certain genetic conditions such as Down syndrome, Fragile X syndrome, and Rett syndrome etc.

The severity of ASD is based on evaluations of impairment caused by both deûcits in social

Bangladesh J Medicine 2019; 30 : 1-3

DOI: https://doi.org/10.3329/bjmed.v30i1.39915

communication and in restricted, repetitive behaviors. Within these 2 categories, severity is rated levels 1-3, with level 3 implying most severe deûcit with a need for very substantial support, including full-time aides or intensive therapy in some cases. Level 2-requiring substantial support, such as speech therapy or social skills training and Level 1 requiring support but this is the mildest level of ASD. People at this level generally have mild symptoms that don't interfere too much with work, school, or relationships.[8]

Issues of comorbidity in ASD is quite complex. Approximately 50% exhibit severe or profound intellectual disability, 35% exhibit mild to moderate intellectual disability, and the remaining 20% have IQs in the normal range.[8] Intellectual disability and autism spectrum disorder frequently co-occur[9] Neurologic comorbidities include epilepsy, sleep dysfunction, motor delay, dyspraxia, incordination, and gait disturbances. A range of behavioral diûculties can be observed in ASD including hyperactivity, obsessive compulsive phenomena, self-injury, aggression, stereotypes, tics, and aûective symptoms. Aûective symptoms are frequently observed and include lability, inappropriate aûective responses, anxiety, and depression. Overt clinical depression is sometimes observed, and this may be particularly true for adolescents.

A number of screening instruments for ASD have been developed. Modiûed Checklist for Autism in Toddlers (M-CHAT) is a free online 23-item autism screening tool designed to identify children 16-30 mo of age. If screening indicates ASD symptomatology, a thorough diagnostic assessment should be performed. Multidisciplinary assessment is optimal in early diagnosis and treatment. The Autism Diagnostic Observation Schedule (ADOS), which is a semi structured interactive assessment of communication, social interaction, and play (or imaginative use of materials) by a professional trained in its administration. The ADOS consists of four modules, examiner selects the module that is most appropriate for a particular child or adult on the basis of his/her expressive language level ranging from nonverbal to verbally-fluent and chronological age.

All children with ASD should have a medical assessment to find out some genetic disorders e.g. hypothyroidism, signs of tuberous sclerosis, fragile X testing etc, psychological assessments that clarify cognitive ability and adaptive skills, communication assessment, including measures of both receptive and expressive vocabulary for treatment planning. Occupational and physical therapy evaluations may be needed to evaluate sensory and/or motor diûculties. Sleep is also an important variable to assess.

ASD symptoms in older children and adolescents who attend school are often first recognized by parents and teachers. Every school should have special education teacher. He/she may perform an initial evaluation and then recommend for further evaluation and assessment. Parents talk with the specialists about their child's social difficulties including problems with subtle communication. Subtle communication issues may include problems understanding tone of voice, facial expressions, or body language. Older children and adolescents may have trouble understanding figures of speech, humor, or sarcasm. Parents may also find that their child has trouble forming friendships with peers.

Diagnosing ASD in adults is often more difficult than diagnosing ASD in children. In adults, some ASD symptoms can overlap with symptoms of other mental-health disorders, such as anxiety or attention-deficit/ hyperactivity disorder (ADHD). Adults, who notice the signs and symptoms of ASD, ask for an ASD evaluation by a neuropsychologist, psychologist, or psychiatrist who has experience with ASD. Information about the adult's developmental history from parents or other family members will help in making an accurate diagnosis and to determine the types of services and supports that are most helpful for improving the functioning and community integration of transition-age youth and adults with ASD. Vocational training along with future self-sufficiency planning becomes critical in adolescence and early adulthood.

There is no standardized treatment recommendation for different levels of ASD. Treatment depends on each person's unique symptoms. Early comprehensive and targeted behavioral interventions can improve social communication and reduce anxiety and aggression. ASD has a variety of speech issues. Some children with ASD might not be able to speak at all, while others might have trouble engaging in conversations with others. Speech therapy can help to address a wide range of speech problems. Some children with ASD have trouble with motor skills. This can make things like jumping, walking, or running difficult. Physical therapy can help to strengthen muscles and improve motor skills. **Occupational therapy** can help to learn how to use hands, legs, or other body parts more efficiently. This can make daily tasks and working easier. **Sensory training** helps to become more comfortable with sensory input

Applied Behavioral Analysis (ABA) therapy is used to increase language and communication skills. It is also used to improve attention, focus, social skills, memory, and academics. Early Intensive Behavioral Intervention (EIBI), a treatment based on the principles of applied behavior analysis delivered for multiple years

at an intensity of 20 to 40 hours per week, is one of the more well-established treatments for ASD.[10] More Than Words – The Hanen Program for Parents of Children with ASD is a family-focused, social pragmatic intervention program for young children with ASD. The goal of More Than Words is to empower parents to become the primary facilitator of their child's communication and language development, thereby maximizing the child's opportunities to develop communication skills in everyday situations. More Than Words addresses the needs of both non-verbal and verbal children with ASD under the age of five. More Than Words has three objectives: i) Parent education ii) Early communication intervention; and iii) Social support for parents.

The Cochrane Database Systemic review reinforces the effectiveness of parent-mediated early interventions in terms of the benefits for both children with ASD and their parents. There also a recommendation for monitoring of the level of parent stress.[11]

Pharmacologic interventions sometimes may increase the ability of children with ASD to beneût from educational and other interventions. Common targets for pharmacologic intervention include associated comorbid conditions e.g. anxiety, depression, irritability, hyperactivity, repetitive behavior, stereotypy, self-injurious behavior. The FDA has approved risperidone (ages 5-16 yr) and aripiprazole (ages 6-17 yr) for the treatment of irritability in ASD, as evidenced by physical aggression, self-injury, and severe tantrum behavior.[12] Drugs can reduce comorbid symptoms, but do not directly improve social communication.

ASD people suffer from different kind of challenges and disabilities. In developed countries, the Government takes responsibility for their education, training and rehabilitation. Our Government has also taken many measures to increase the social awareness and to improve the quality of life of this challenged group of people so that they can substantially contribute instead of becoming burden to the society.

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