EDITORIAL

Autism spectrum disorder

Stella Green

Green S. Autism spectrum disorder. Neurodev Disord Treat. 2022; 5(3):19-21.

ABSTRACT

Autism spectrum disorder is a phrase used to describe a constellation of early-appearing social communication difficulties and repetitive sensory-motor activities associated with a strong genetic component as well as other factors. Many persons with autism spectrum disorder have a better outlook now than they did 50 years ago; more people with the diagnosis can speak, read, and live in the community rather than in institutions, and some will be largely free of symptoms by maturity. However, the majority of people will not work full-time or live alone. Genetics and neurology have discovered intriguing risk patterns, but they have yet to provide many practical benefits. Considerable work is still needed to understand how and when behavioral and medical treatments can be effective, and for which children, including those with substantial comorbidities. It's also critical to put what we've learned into practice and build programmers for adults with autism spectrum disorders. Clinicians can help families navigate referrals and access to community support systems by offering timely and tailored assistance, giving correct information despite sometimes unfiltered media input, and predicting transitions such as family changes and school admission and exit.

Key words: *Autism; Autism Spectrum Disorder (ASD); Mental Disorders; Communication and Symbolic Behavior Scales (CSBS)*

EDITORIAL

In the past 50 years, Autism Spectrum Disorder (ASD) has gone from a strictly defined, rare disorder of childhood-onset to an extensively acknowledged, promoted, and researched lifelong condition, recognized as quite common and very heterogeneous. Since its inception, the essential characteristics of ASD have remained mostly unchanged: social communication difficulties and repetitive and atypical sensory-motor behaviors [1]. Autism, on the other hand, is now viewed as a spectrum that can range from moderate to severe. Nonetheless, many (but not all) people with ASD require lifelong assistance in some form. ASD is a significant financial burden, owing to the need to provide help to adults who are unable to function independently, which results in greater health-care and education costs, as well as a loss of income for careers.

Although ASD is a biological problem, it is generally treated through education and behavioral therapy, with medication as an important adjunct. This Seminar focuses on summarizing current findings so that physicians may provide advice to families in the context of ASD [2].

Regardless of culture, color, ethnicity, or socioeconomic status, people with ASD have essential traits in two areas: social communication and confined repetitive sensory-motor behaviors. ASD is caused by abnormal brain development and neuronal reorganization at a young age. However, because no reliable biomarkers exist, the diagnosis must be made based on behavior. The Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 criteria, issued by the American Psychiatric Association in 2013, were designed to make ASD diagnosis easier. The two domains (social communication and restricted, repetitive, or atypical sensory-motor behaviors) have now been combined into a single ASD spectrum. Clinically unreliable subtypes such as Asperger's disorder and pervasive developmental disorder not otherwise defined have recently been merged under the single diagnosis of ASD. Furthermore, the DSM-5 acknowledges that ASD can be associated with other diseases, such as genetic disorders (e.g., fragile X syndrome) and mental conditions (e.g., Attention-Deficit Hyperactivity Disorder [AHD]) The Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 criteria, issued by the American Psychiatric Association in 2013, were designed to make ASD diagnosis easier [2,3]. The two domains (social communication and restricted, repetitive, or atypical sensory-motor behaviors) have now been combined into a single ASD spectrum. Clinically unreliable subtypes such as Asperger's disorder and pervasive developmental disorder not otherwise defined have recently been merged under the single diagnosis of ASD. Furthermore, the DSM-5 acknowledges that ASD can be associated with other diseases, such as genetic disorders (e.g., fragile X syndrome) and mental conditions (e.g., Attention-Deficit Hyperactivity Disorder [AHD]) The Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 criteria, issued by the American Psychiatric Association in 2013, were designed to make ASD diagnosis easier [4]. The two domains (social communication and restricted, repetitive, or atypical sensory-motor behaviors) have now been combined into a single ASD spectrum. Clinically unreliable subtypes such as Asperger's disorder and pervasive developmental disorder not otherwise defined have recently

Editorial Office, Neurodevelopmental Disorders and Treatment, Windsor, Berkshire, England

Correspondence: Stella Green, Editorial Office, Neurodevelopmental Disorders and Treatment, Windsor, Berkshire, England, E-mail: neurodev.treat@gmail.com

Received: 01-Mar-2022, Manuscript No. pulndt-22-4446; Editor Assigned: 03-Mar-2022, PreQC No. pulndt-22-4446(PQ); Reviewed: 13-March-2022, QC No.pulndt-22-4446(Q); Revised: 15-Mar-2022, Manuscript No. pulndt-22- 4446(R) Published: 21-Mar-2022, DOI No. 10.37532/pulndt.22. 5(3).19-21.

been merged under the single diagnosis of ASD. Furthermore, the DSM-5 acknowledges that ASD can be associated with other diseases, such as genetic disorders (e.g., fragile X syndrome) and mental conditions (e.g., Attention-Deficit Hyperactivity Disorder (AHD))

A person must have or have had trouble in two of the four restricted, repetitive sensory-motor behaviors to be diagnosed with ASD. In DSM-5, there are also additional proposed severity levels based on the need for support, which has proven dubious validity thus far, despite the importance of the idea of functioning.

Screening and subsequent diagnosis issues for parents and clinicians are frequently different for very young children than for older children, adolescents, and adults, and will be treated individually. There is no evidence from well-controlled trials that early intervention affects adult outcomes, and it is typically impossible to measure characteristics that predict later outcomes (e.g., language development or cognitive ability) at the ages indicated for early screening (18–30 months). In general populations, many public health systems have attempted to detect very young children with ASD. However, screening methods have traditionally been insufficiently sensitive, failing to identify the majority of children with ASD in general populations whose parents have not yet detected a delay [5].

Screening instruments become more predictive for children as young as 18 months old when parents have reported a worry to a family member, acquaintance, or professional. Even when parents request assistance, referrals are frequently not made. When a parent or professional is concerned that a child may have ASD, a variety of screening tools are useful, the most popular of which is the Modified Checklist for Autism in Toddlers (M-CHAT) and, less commonly, the Communication and Symbolic Behavior Scales (CSBS). Almost all of the children identified by these screening tools have developmental issues, albeit not all of them have ASD. Children with ASD who had continuous sources of pediatric care, frequent interaction with grandparents, and older siblings obtained diagnosis earlier than children with no siblings, according to a survey14 [5,6]. The diagnosis of children with ASD who had a younger sibling who was close in age was the most delayed. Many strategies, in addition to screening instruments, can lead to earlier diagnoses: raising awareness of ASD in the family and community, encouraging the belief that getting a diagnosis is worthwhile, facilitating relationships between specialists and primary care providers to provide screening and make referrals, and improving access to services, to name a few.

ASD can be diagnosed by a variety of professions (pediatricians, psychiatrists, or psychologists), with the best results coming from a multidisciplinary approach. The Screening Tool for Autism in Toddlers and Young Children (STAT; a 20-minute observation for young children) and the more heavily researched Autism Diagnostic Observation Schedule are two standardized diagnostic instruments available (ADOS;16 a 45-min observation done by a skilled professional, available in different formats for people of different language levels and ages, from 12 months to adulthood). These instruments allow the clinician to watch and characterize the specific behaviors of the individual suspected of having ASD while accompanied by the caregiver. Caregivers interviews, such as the Autism Diagnostic Interview-Revised (ADI-R) or, more commonly in the UK, the Diagnostic Instrument for Social Communication Disorders (DISCO), or the computer-generated Developmental, Dimensional, and Diagnostic Interview (3di), are used for research or a more comprehensive developmental history, with many clinicians relying on informal histories. A variety of assessments, such as the Childhood Autism Rating Scale (CARS), the Social Responsiveness Scale (SRS), and the Social Communication Questionnaire, can be used to assess a child's symptoms (SCQ). Adaptive scales are frequently used to assess daily functioning. Obtaining information on receptive and expressive language levels, general behavioral issues, and motor skills, as well as cognitive functioning or IQ estimate, is considered standard procedure.

Clinicians should not depend exclusively on parent reports or tools like the ADOS; diagnoses based on a combination of clinician observation and caregiver accounts are consistently more trustworthy than diagnoses based on either observation or reports alone. Children who do not have language delays, are female, belong to an ethnic minority, have a low socioeconomic position, or come from households who do not speak English fluently (at least in the United States) are commonly diagnosed later [7].

In contrast to many other medical diseases, ASD is unique in that the family's reactions to the kid and the diagnosis have just as much of an impact on the child's outcome as any specific treatment. Even if the next steps are not obvious, providing information to family members about resources is just as vital as applying diagnostic labels to the child, including ASD and other illnesses. Families require follow-up from a key professional, particularly throughout transitional periods such as diagnosis, school entry and exit, and family upheavals. Assisting a family with locating a child's initial official therapy is only the first step in a process that will involve multiple levels of care and numerous decision points.

Clinicians have long recognized that ASD is frequently accompanied by other problems. Developmental delay or intellectual disability, as well as language and motor issues, are frequently the first considerations, in addition to ASD. Even within psychiatry, the DSM-5 recognizes this complexity by permitting several diagnoses, such as ASD and ADHD. ADHD is the most prevalent comorbidity in persons with ASD (282 per cent (95 per cent CI 133–430)), and it has a significant impact on outcomes in children with ASD who are intelligent or have intellectual disabilities. 43 In terms of connections with executive functioning, peer relationships, and depression, the way ADHD affects children and adults evolves through time and should be tracked [8].

Many children with ASD suffer from anxiety in numerous forms, including social anxiety, generalized anxiety, separation anxiety in younger children, and phobias. Anxiety and sadness are more common, or at least more visible, in verbally fluent people, and they grow in girls during adolescence, while they also affect a significant minority of boys.

Irritability and aggression are more common in ASD (25%) than in other developmental disorders (e.g., idiopathic intellectual disability), albeit they can take many various forms, ranging from mild physical aggression in infants to verbal hostility in adulthood.

ASD is now seen as a syndrome stemming from overall brain reorganization beginning early in development, rather than a focused impairment in a single brain region or system. A pattern of overgrowth of brain volume in infancy and early childhood, as revealed by changes in brain volume on neuroimaging, is one of the well-replicated discoveries. Those with ASD have faster brain development early in life compared to typically developing children, resulting in abnormal connections. Connectivity is a comprehensive notion that includes both physical links and correlations or causal relationships in distinct regions' activity. The findings demonstrate a pattern of overall brain under connectivity combined with local over connectivity within certain regions, most commonly the frontal and occipital [9].

We don't have strong evidence for how altered connectivity differentially affects specific brain regions, measurements (e.g., brain volume [grey vs white matter], cortical thickness, gyrification), or conditions because the underlying cellular mechanisms for these neural patterns in early development are still unknown (e.g., recording parameters or tasks).

Differences in sensitivity to the environment and diverse learning styles, which contribute to brain reorganization during development, resulting in heterogeneous profiles in adults with ASD, have been further explained by research on altered brain development and functioning.

Subtle changes in numerous brain regions that assist social and attentional mechanisms are seen long before overt behavioral signs

appear. As diverse individuals adopt adaptive and compensating methods to meet their obstacles, these changes might sometimes persist into adulthood. Although it was believed that head circumference would be a valuable biomarker for tracking individual differences in brain growth over time, it has been demonstrated to be ineffective as a prediction of ASD. Given the complexities and uncertainty surrounding the origins of ASD, it is critical to convey correct information to families and other caregivers, particularly around the time of diagnosis, concerning biological variations that may underpin their child's behavior or learning styles.

CONCLUSION

Many children and people with ASD have a better quality of life now than they did 50 years ago. Even accounting for the changes in which persons would satisfy the diagnostic criteria now and in the past, as well as their various levels of intellect, more adults with ASD can talk, read, drive, graduate from high school, and live in the community. Caregivers should rest assured that the situation for most persons with ASD has improved and will continue to improve. We hope that research focuses on those who still face significant challenges and opens doors to increased participation and independence for more people. Both science and public policy can help bring about these improvements. Clinicians may make a difference in the lives of individual children and adults by giving accurate and realistic information, support, and hope in collaboration with families, schools, and community services.

REFERENCES

1. Kanner L. Autistic disturbances of affective contact. Nervous Child. 1943; 2(3): 217-50.

2. Lavelle TA, Weinstein MC, Newhouse JP, et al. Economic burden of childhood autism spectrum disorders. Pediatrics 2014; 133(3): e520-29.

3. Khan NZ, Gallo LA, Arghir A, et al. Autism and the grand challenges in global mental health. Autism Res 2012; 5: 156-59.

4. Bauman ML, Kemper TL. Neuroanatomic observations of the brain in autism: a review and future directions. Int J Dev Neurosci 2005; 23(2-3): 183-87.

5. O'Reilly C, Lewis JD, Elsabbagh M. Is functional brain connectivity atypical in autism? A systematic review of EEG and MEG studies. PLoS One 2017; .12(5):e0175870

6. Lord C, Petkova E, Hus V, et al. A multisite study of the clinical diagnosis of different autism spectrum disorders. Arch Gen Psychiatry 2012; 69(3): 306-13.

7. Maenner MJ, Rice CE, Arneson CL, et al. Potential impact of DSM-5 criteria on autism spectrum disorder prevalence estimates. JAMA Psychiatry 2014; 71(3): 292-300.

8. Weitlauf AS, Gotham KO, Vehorn AC, et al. Brief report: DSM-5 "levels of support:" a comment on discrepant conceptualizations of severity in ASD. J Autism Dev Disord 2014; 44(2): 471-76.

9. Mandell D, Mandy W. Should all young children be screened for autism spectrum disorder? Autism 2015; 19(8): 895-96.