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Autism Spectrum Disorder

Uzma Sabeen Bangash *

Corresponding Author: Uzma Sabeen Bangash, Licenced Clinical Psychologist UAE.

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Autism Spectrum Disorder is Neurodevelopment disorder that causes a wide range of impairments in social communication and restricted and repetitive behaviours.

A diagnosis of ASD now includes several conditions that used to be diagnosed separately: autistic disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome. These conditions are now all called autism spectrum disorder. People with ASD often have problems with social, emotional, and communication skills.

Urgent medical attention is usually recommended in severe cases by healthcare providers. Treatments can help manage condition with no known cure and rarely requires lab test or imaging. This is a lifelong condition and family history may increase the likelihood.

Symptoms

Symptoms are classified into two categories, social communication and interaction and patterns of behaviour.

Social communication and interaction:

- Poor eye contact and lack of facial expressions
- Delayed speech or does not speak
- Does not understand questions and directions
- Gets aggressive or disruptive
- Does not respond to his or her name
- Repeats phrases or words
- Resists cuddling and holding

Patterns of behavior:

- Repetitive movements like hand shaking, spinning, or rocking
- Difficulty in body movement coordination
- Sensitive to light, sound or touch
- Self - harming activities such as head-banging
- Specific food preferences or food pattern

Additional social challenges can include difficulty with:

- Recognizing emotions and intentions in others
- Recognizing one's own emotions
- Expressing emotions
- Seeking emotional comfort from others
- Feeling overwhelmed in social situations
- Taking turns in conversation
- Gauging personal space (appropriate distance between people)

Restricted and repetitive behaviours

Restricted and repetitive behaviours vary greatly across the autism spectrum. They can include:

- Repetitive body movements (e.g. rocking, flapping, spinning, running back and forth)
- Repetitive motions with objects (e.g. spinning wheels, shaking sticks, flipping levers)
- Staring at lights or spinning objects
- Ritualistic behaviors (e.g. lining up objects, repeatedly touching objects in a set order)
- Narrow or extreme interests in specific topics
- Need for unvarying routine/resistance to change (e.g. same daily schedule, meal menu, clothes, route to school)

Adolescence, Sexual Health, Puberty

Adolescence: Transition between childhood/adulthood (10-19)-Important stage of brain development-

Onset of puberty-Major changes – physically, physiologically, psychologically Adolescence and ASD: Will be different for each individual-Improvements in behaviours

- Lesser repetitive/dysfunctional behaviours-Improvements in adaptive skills and daily living skills (form playing to social chit chat)-Increased social interest
- Increased risk of seizures, sleep problems, anxiety, and depression
- The gap between maturation of the executive functioning (organisation, managing time) widens between people with and without ASD

Puberty and ASD:

Major period of transition-ASD does NOT affect when someone will reach/start puberty-Varied findings about timing of puberty - but can be comparable to NT individuals (May et al., 2017)-Individuals with ASD (regardless of development in other areas), is likely to be physically on par with peers-There may be socio-emotional delays/differences to peers

PREPARING FOR PUBERTY:-Important to discuss about puberty (what is involved & changes) EARLY ON-Need to know what happens and work out ways to make the experience as smooth as possible for them-Higher risk of abuse/being accused of abuse as puberty wasn't explained to them

Causes

There is no known cause but genetics and environmental factors may play a role:

- Genetics : Certain gene mutations (genetic changes) might cause ASD.
- Some genetic mutations could be inherited.
- Genetic disorders such as Rett syndrome or fragile X syndrome could also be a cause.
- Few genes may affect development of brain cells

Environmental factors: Researchers are evaluating whether air pollutants, medication, viral infection, or complication during pregnancy lead to this disorder

Risk factors include:

- Gender- More common among boys
- Family history
- As we said that the exact cause of ASD is unknown.

The most current research demonstrates there's no single cause, more explanation:

- Having an immediate family member who's autistic
- Certain genetic mutations
- Fragile X syndrome and other genetic disorders
- Being born to older parents
- Low birth weight
- Metabolic imbalances

- Exposure to heavy metals and environmental toxins
- A maternal history of viral infections
- Fatal exposure to the medications valproic acid or thalidomide (Thalomid)

According to the National Institute of Neurological Disorders and Stroke (NINDS)Trusted Source, both genetics and environment may determine whether a person develops ASD.

However, multiple sources, old and new Trusted Source, have concluded that vaccines do not cause ASD.

A controversial 1998 study proposed a link between autism and the measles, mumps, and rubella (MMR) vaccine. However, that study has been debunked by other research and was eventually retracted in 2010. Read more about autism and its risk factors.

Assessment:

The assessment process:

1. Screening assessments

2. Diagnostic assessments – must find clinical that's diagnostically trained

3. New National Guidelines

Diagnosis: Diagnosis effects the child, family, community- Families can choose whether they disclose the diagnosis to their child- Process is not instant

Prevention

There is no any possible way to actually pívent ASD. Yet, eaíly diagnosis and deep obseívation is advised.

- Paíents should look foí eaíly symptoms in the child
- If it íuns in the family, it is íecommended to consult a specialist befoíe píegnancy oí eaíly stages of píegnancy

Treatment

Commonly Recommended

The treatment aims at preparing the child to manage his/her routine activities and improve social, communication and behavioral skills. Medications may be prescribed depending on the requirement to control extreme behaviors like hyperactivity or anxiety.

Medication

Antipsychotics

To control irritability and aggression Common drugs :

Risperidone, Aripiprazole

Stimulants

For hyperactivity, impulsivity and inattention Common drugs :

Methylphenidate, Atomoxetine, Clonidine

Prevention

There is no any possible way to actually prevent ASD. Yet, early diagnosis and deep observation is advised.

- Parents should look for early symptoms in the child
- If it runs in the family, it is recommended to consult a specialist before pregnancy or early stages of pregnancy

What is important to do:

Early intervention: - Brain develops most in the first 7yrs- Research shows early supports may improve outcomes for the child in long terme.g. increased social skills, increased daily living skills and independence skills

Family: Family centred and culturally sensitive-

Inclusion: engage child in natural environments (classroom/home work on generalisation of skills)

- TEAMWORK: Collaborative teamwork practice, capacity-building practice
- UNIVERSAL PRINCIPLE: intervention must be evidence based & outcomes based
- Principles of Good Practice:

Key Points

- Amount, timing duration of intervention: - recommended 15-25 hours a week of intensive intervention
- Individualised planning and Assessment:- Make sure that the intervention is right for the child- Strengths/needs based- Strengths based and needs based programming
- Review, evaluate and adjust- Review regularly because child's needs may change FOR KIDS WITH ASD, INTERVENTION NEEDS TO BE:
- Relevant program content (is the intervention touching on all levels?) Supportive teaching environments and generalization strategies Predictable and routine (reduce anxiety)
- Functional approach to behaviours (knowing environmental triggers/support) Transition support (for individual and family)
- Family involvement
- Use of visuals (KEY, they help retain auditory information Multidisciplinary and collaborative (work on generalisation of skills)

Complications

Caíing foí the autistic child can be stíessful foí the family membeís.

And disturbance for their social life

Specialist to consult

Child Neurologist

Specializes in diagnosis and management of conditions that affect the nervous system in neonates (newborns), infants, children and adolescents.

Psychiatrist

Specializes in the branch of medicine concerned with the diagnosis and treatment of mental illness.

Psychologistand speech therapist

Specializes in diagnosing and treating diseases of the brain, emotional disturbance, behaviour problems and Speech problems

Treatment Therapies for ASD.

- Behavioral management therapy
- Cognitive behavior therapy
- Early intervention
- Educational and school-based therapies
- Joint attention therapy
- Medication treatment
- Nutritional therapy
- Occupational therapy
- Parent-mediated therapy
- Physical therapy
- Social skills training
- Speech-language therapy

Many people with ASD benefit from treatment, no matter how old they are when they are diagnosed. People of all ages, at all levels of ability, can often improve after well- designed interventions.

What is epilepsy?

EPILEPSY:

Epilepsy is due to an imbalance in brain chemistry, which means that the messages that travel between nerve cells or neurons become scrambled. Because of this, the activity of neurons is disturbed and results in a seizure or loss of consciousness. Many types of seizure can occur and epilepsy can affect anyone at any age.

Epilepsy is a neurological disorder that causes recurrent seizures. Seizures are the result of atypical or uncontrolled electrical activity in the brain.

Is there a link between autism and epilepsy?

The first studies on the subject in the 1960s helped to show that autism is a condition of the brain. We now know that autistic people are more likely to develop epilepsy than those who are neurotypical. We also know that people with epilepsy are more likely to be autistic than those without epilepsy.

Conditions such as attention deficit hyperactivity disorder, anxiety and sleep disorders are common in both epilepsy and autism. Epilepsy is generally not a contraindication to treating these conditions with suitable medication, but it is important to take account of relevant drug interactions.

There is no evidence that seizures or epilepsy (that is, recurrent seizures) cause autism. Several research studies have shown that the relationship between autism and epilepsy is not one of cause and effect.

Who is most at risk of developing epilepsy?

Different studies have shown that intellectual disability (ID) is the major risk factor for autistic people developing epilepsy. The risk for epilepsy in autistic children without an ID is 8%, increasing to 20% in those with an ID. The risk can be as high as 40% in those with severe intellectual disability. Among autistic children who have IQs above 70, approximately 4% develop epilepsy.

As children with autism reach the teenage years, the risk of developing seizures increases, and continues to increase into young adulthood. Other factors such as gender, regression of language and social function don't increase the likelihood of an autistic child developing epilepsy.

How does diagnosis work?

The way that a neurologist (or paediatrician) diagnoses seizures or epilepsy is the same whether or not the person is autistic. However, there are some characteristics associated with autism which can be confused with signs of seizures, such as staring or repetitive movements.

If an autistic person stares without responding or does short, rhythmic movements which are unusual, it could be worth seeing a specialist to check whether they are having seizures. Even a slight concern should always be checked out.

Before making a diagnosis of epilepsy, a neurologist will find out the cause of the seizures by doing some tests. This may include:

- an electroencephalogram (EEG) during sleep
- an MRI
- genetic testing.

Supporting people with autism and epilepsy with seizures

Many of the aspects of supporting autistic people with epilepsy are like supporting someone who has epilepsy and is neurotypical. For example, first aid for seizures.

However, being autistic can make it harder to explain individual experiences and sensations to others – which can mean it's harder to get the right help at the right time.

For example, a person with epilepsy may have odd sensations before a seizure happens, such as a strange taste in the mouth or blurred vision. Often these signs may not be obvious from the outside, and if a person is autistic, they may have difficulty communicating what they are experiencing.

There is also a risk the signs of an imminent seizure might be misinterpreted as sensory issues

relating to someone's autism and not their epilepsy. It's therefore especially important to be alert to any small changes in behaviour which might mean something's not quite right. This might be:

- fidgeting
- picking fingers,
- slapping lips
- becoming unusually clingy.
- Getting to know the individual is key to understanding their triggers and signs.

Helping with communication

Some autistic children or adults will be able to tell you about the feelings they are experiencing, but for those who use alternative communication it's important to have a methodology in place that they are comfortable using to tell you how they are feeling.

For example, symbols or pictograms of the body can be helpful when trying to work out what hurts or feels strange. Social stories may be helpful, or having a particular sign or symbol in PECs or Makaton to indicate something hurts or doesn't feel right.

Keeping everyone informed

Sharing information about how a person's epilepsy affects them with key people across the different settings in their life (at home, school, work or in services they use), is vital and should be done as a matter of course.

This includes general information about their epilepsy, such as the normal length of their seizures and recovery, as well as specific information such as how best to communicate with them about

triggers. It's important that autistic people with epilepsy aren't made to feel different because they have epilepsy, and that they are included in everything they are able and want to take part in.