



CHILDHOOD AUTISM: THE UNKNOWN FACT


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ABSTRACT

Autism spectrum disorders (ASDs) are an issue of significant and growing importance to the field of public health. Autism is cognitive, neurodegenerative disorder. The prevalence of ASDs is rising, and these disorders significantly impact the quality of life of affected persons and their families. Though the etiology of ASDs has not yet known, studies are going on. Autism is a serious problem in the case of children. Social as well as mental support is required for such children. Here we review the emerging risk of ASD in children, symptoms and treatment or management.

Keywords :-Autism, cognitive, neurodevelopmental disorder.

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INTRODUCTION

Autism is a complex neurobehavioral condition that includes impairments in social interaction and developmental language and communication skills combined with rigid, repetitive behaviors. Parents usually notice signs in the first two years of their child's life. The diagnostic criteria require that symptoms become apparent in early childhood, typically before age three [1, 2].

Autism is due to a combination of genetic and environmental factors. Some cases are strongly associated with certain infections during pregnancy including rubella, use of alcohol or cocaine [3]. Autism affects information processing in the brain by altering how nerve cells and their synapses connect and organize but it is not proven. Early speech or behavioral interventions can help children with autism gain self-care, social and communication skills. Not many children with autism live independently after reaching adulthood, though some become successful [4, 5].

CAUSES

The chromosomal abnormalities that have been implicated

in autism are;

- (1) Deletion of genetic material during meiosis
- (2) Duplication of genetic material during meiosis
- (3) Inversion of genetic material during meiosis

Autism has a strong genetic basis, although the genetics of autism are complex and it is unclear whether ASD is explained more by rare mutations with major effects. Complexity arises due to interactions among multiple genes, the environment, and epigenetic factors which do not change DNA sequencing but are heritable and influence gene expression. Many genes have been associated with autism through sequencing the genomes of affected individuals and their parents.

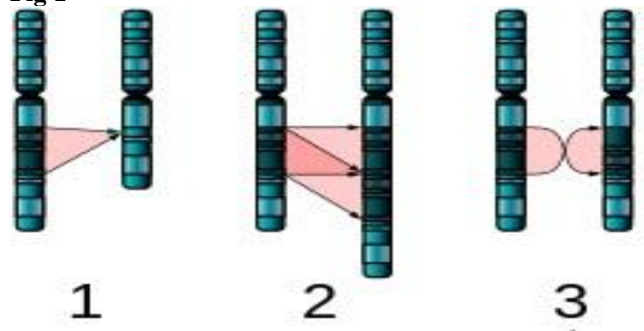
Exposure to air pollution during pregnancy, especially heavy metals and particulates, may increase the risk of autism. Environmental factors that have been claimed without evidence to contribute to or exacerbate autism include certain foods, infectious diseases, solvents, diesel exhaust, PCBs, phthalates and phenols used in plastic products, pesticides, brominated flame retardants, alcohol, smoking, illicit drugs, vaccines, and prenatal stress. No evidence has been found for these claims, and some the

MMR vaccine has been completely disproven.

SIGNS

- Unusual social development becomes apparent early in childhood. Autistic infants show less attention to social stimuli, smile and look at others less often, and respond less to their own name. They have less eye contact and turn-taking and do not have the ability to use simple movements to express themselves, such as pointing at things.
- About a third to a half of individuals with autism do not develop enough natural speech to meet their daily communication need. Differences in communication may be present from the first year of life, and may include delayed onset of babbling, unusual gestures, diminished responsiveness and vocal patterns.
- Self injury, behaviour such as skin picking, hand biting, head banging are common.

Fig 1



MECHANISM

Although the exact mechanism of autism is not known, the cellular and molecular bases of pathological early overgrowth include the following:

- An excess of neurons that causes local over connectivity in key brain regions.
- Disturbed neuronal migration during early gestation.
- Unbalanced excitatory–inhibitory networks.

MANAGEMENT

Families and the educational system are the main resources for treatment. The main goals when treating children with autism are to lessen associated deficits and family distress and to increase quality of life. Intensive sustained special education programs and behavior therapy early in life can help children acquire self-care, social and job skills, and often improve functioning and decrease symptom severity and maladaptive behaviors. Available approaches include applied behavior analysis (ABA), developmental models, structured teaching, speech and language therapy, social skills therapy, and occupational therapy.

EDUCATION

Applied behavior analysis (ABA) has demonstrated effectiveness in enhancing global functioning in preschool children and it helps in improving intellectual performance and communication skills in young children.

MEDICATION

Anti depressants, stimulants and anti psychotics are the common drug classes used in autism. Risperidone and Aripiprazole (anti psychotics) have been found to be useful for treating irritability repetitive behavior and sleeplessness.

SOCIAL DEVELOPMENT

The emergence of the autism rights movement has served as an attempt to encourage people to be more tolerant of those with autism. Through this movement, people hope to cause others to think of autism as a difference instead of a disease.

SPEECH THERAPY

Speech-language pathologists are therapists who specialize in treating language problems and speech disorders. They are a key part of the autism treatment team. Once autism is diagnosed, speech therapists assess the best ways to improve communication and enhance a person's quality of life.

Speech therapy techniques might include:

- Electronic "talkers".
- Signing or typing.
- Using picture boards with words, known as picture exchange communication systems that start out using pictures instead of words to help a child learn to communicate.
- Using sounds to which a person is over- or under-sensitive to expand and compress speech sounds.
- Improving articulation of speech by massaging or exercising lips or facial muscles.
- Having individuals sing songs composed to match the rhythm, stress, and flow of sentences.

CONCLUSION

Our perception of autism has changed over time. Autism was nothing more than unrecognized developmental delays generally occur in with mental retardation. Today it is recognized as an independent neurologically based disorder of significance, a major public health problem and a topic of much concern. Actual cause of autism is not known. Numerous treatments have been developed that help children with autism to increase their potential to learn and become socially fluent. Speech therapy is one of such therapy. Studies are yet going on the field of its therapy. Autistic children and their family require social as well as mental support. This article goes through the causes, mechanism and management of autism.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

CONSENT

Informed consent of the patient was obtained.

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Nil

CONFLICT OF INTEREST

Nil

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