ABSTRACT:
Autism is a neurological disorder that can impair communication, socialization and behavior. It is usually diagnosed within the first three years of life and is four times more common in boys than in girls. However, some types of Autism may not be diagnosed until years later when the child enters school, due to late-occurring social deficits or difficulty playing with others. When this occurs, the child is usually too old to take advantage of early childhood intervention services and is evaluated for entry into the special education system.

INTRODUCTION:
Autism spectrum disorders (ASDs) are a group of developmental disabilities that can cause significant social, communication and behavioral challenges. People with ASDs handle information in their brain differently than other people. ASDs are “spectrum disorders.” That means ASDs affect each person in different ways, and can range from very mild to severe. People with ASDs share some similar symptoms, such as problems with social interaction. But there are differences in when the symptoms start, how severe they are, and the exact nature of the symptoms.

Autism is an incapacitating disturbance of mental and emotional development. It is a neurodevelopmental disorder in which social interactions, language, behavior and cognitive functions are impaired severely. It effects individuals from different ethnic backgrounds and social classes. This life long development disability manifests itself during the first 3 years of life is difficult to diagnose and has no cure.

HISTORY:
New Latin word Autism was coined by a Swiss Psychiatrist Eugen Bleuer in 1910 as he was defining the symptoms of schizophrenia. He derived it from Greek word AUTOS(self) “Morbid Self Admiration”. This word was used by Hans Asperger when he was studying child psychology to define Aspergers syndrome. Leo Kanner first used Autism in its modern sense in English when he introduced Early Infantile Autism in 1943 in a case report of 11 children.

EPIDEMIOLOGY: Prevalence is 1-2 per 1000. Four times more common in males. There is a Dramatic increase in patients diagnosed with Autism since 1980

CLASSIFICATION: AUTISM is a part of Autism spectrum disorders.

1. Autism :people with autistic disorder usually have significant language delays, social and communication challenges, and unusual behaviors and interests. Many people with autistic disorder also have intellectual disability.

2. Aspergers syndrome. People with Asperger syndrome usually have some milder symptoms of autistic disorder. They might have social challenges and unusual behaviors and interests. However, they typically do not have problems with language or intellectual disability.

3. Pervasive development disorders. ( also called “atypical autism”) –People with PDD usually have fewer and milder symptoms than those with autistic disorder. The symptoms might cause only social and communication challenges.
ETIOLOGY:

Causes and Risk Factors
We do not know all of the causes of ASDs. However, we have learned that there are likely many causes for multiple types of ASDs. There may be many different factors that make a child more likely to have an ASD, including environmental, biologic and genetic factors.

- Most scientists agree that genes are one of the risk factors that can make a person more likely to develop an ASD.
- Children who have a sibling or parent with an ASD are at a higher risk of also having an ASD.
- ASDs tend to occur more often in people who have certain other medical conditions. About 10% of children with an ASD have an identifiable genetic disorder, such as Fragile X syndrome, tuberous sclerosis, Down syndrome and other chromosomal disorders.
- Some harmful drugs taken during pregnancy have been linked with a higher risk of ASDs, for example, the prescription drugs thalidomide and valproic acid.
- We know that the once common belief that poor parenting practices cause ASDs is not true.
- There is some evidence that the critical period for developing ASDs occurs before birth. However, concerns about vaccines and infections have led researchers to consider risk factors before and after birth.

GENETICS IN AUTISM:
Autism has a strong genetic basis. It is explained by more rare mutations with major effects or by rare multi gene interactions of common genetic variant. Early Twin studies estimated hereditary to be over 90%. The genetics of autism is complex more than 1 gene may be implicated. The genes may interact with one another or with environmental factors.

RISK FACTORS:
Include parental characteristics such as advanced paternal age has a greater risk for having children with autism.
CHIEF CHARACTERISTICS:

**Signs and Symptoms**

ASDs begin before the age of 3 and last throughout a person’s life, although symptoms may improve over time. Some children with an ASD show hints of future problems within the first few months of life. In others, symptoms might not show up until 24 months or later. Some children with an ASD seem to develop normally until around 18 to 24 months of age and then they stop gaining new skills, or they lose the skills they once had.

A person with an ASD might:

- Not respond to their name by 12 months
- Not point at objects to show interest (point at an airplane flying over) by 14 months
- Not play "pretend" games (pretend to "feed" a doll) by 18 months
- Avoid eye contact and want to be alone
- Have trouble understanding other people’s feelings or talking about their own feelings
- Have delayed speech and language skills
- Repeat words or phrases over and over (echolalia)
- Give unrelated answers to questions
- Get upset by minor changes
- Have obsessive interests
- Flap their hands, rock their body, or spin in circles
- Have unusual reactions to the way things sound, smell, taste, look, or feel

**OTHER SYMPTOMS**: Aloof behavior. Do not maintain an eye contact. Excessive attachments to objects or toys. Sensory abnormalities found such as under-responsivity or over responsivity to pain. Motor signs including poor muscle tone, poor motor planning. Unusual eating patterns, food pouching.

**SCREENING**: American Academy Of Pediatrics recommends that all children be screened for Autism Spectrum Disorders at 18 to 24 months of age using autism specific formal screening tests.

**SCREENING TOOLS INCLUDE**: 1. Modified checklist for autism in toddlers 2. Early screening of autistic traits questionnaire. 3. Genetic screening still practically not possible.

**Following signs are reason to have a child evaluated**:

- No babbling by 12 months
- No gesturing by 12 months.
- Not speaking single words by 16 months.
- Not speaking 2 word phrases by 24 months.

**DIAGNOSIS**: Diagnosing ASDs can be difficult since there is no medical test, like a blood test, to diagnose the disorders. Doctors look at the child’s behavior and development to make a diagnosis. ASDs can sometimes be detected at 18 months or younger. By age 2, a diagnosis by an experienced professional can be considered very reliable. Autism is defined in DSM IV TR as exhibiting at least 6 symptoms, total including at least 2 symptoms of qualitative impairment in social interaction, at least 1 in communication restricted & repetitive behavior. Diagnosis can be done by using Autism Diagnostic Interview. It is a semi structured parent interview. Autism Diagnostic Observation Schedule (ADOS) is based on observation and interaction with the child. Childhood Autism Rating Scales (CARS) used widely in clinical settings to assess severity of autism is based on observation of child. Neuropsychiatrists assess cognitive, communication skills & behavior.

**ORAL HEALTH PROBLEMS**:

1. **DAMAGING ORAL HABITS**.
2. **DENTAL CARIES**.
3. **PERIODONTAL DISEASES**.
4. **TOOTH ERUPTION**.

**STRATEGIES FOR CARE**: There is currently no cure for ASDs. However, research shows that early intervention treatment services can greatly improve a child’s development. Early intervention
services help children from birth to 3 years old (36 months) learn important skills. Services can include therapy to help the child talk, walk, and interact with others.

CHALLENGES IN MANAGEMENT OF AUTISTIC PATIENTS:

COMMUNICATION PROBLEMS: Talk with parent to determine patient's intellectual & functional abilities & then communicate with patient at a level he or she can understand...Use TELL SHOW DO approach to provide care.

BEHAVIOR PROBLEMS:
Plan a desensitization appointment to help patient become familiar with office, staff & equipment through step by step process. Have patient sit alone on dental chair for him to become familiar with treatment setting. Begin cursory examination using fingers. The familiarity of a tooth brush will help pt feel comfortable. Use a tooth brush to brush teeth & gain additional access to patients. Keep dental instruments out of sight & light out of patient's eye. Praise & reinforce good behavior after each step of procedure. Ignore inappropriate behavior. If all strategies fail, pharmacological options are useful in management. Others need to be managed under GA. People with autism often engage in perseveration. Avoid demonstrating dental equipment if it triggers perseveration.

UNUSUAL RESPONSE TO STIMULI:
- Exhibit unusual sensitivity to sensory stimuli such as sound light, colors & touch. While they may exhibit no reaction to pain & heat. Use a secluded operatory. Allow time for patient to be desensitized to noise of dental setting. Note all findings & experience in patient’s chart.

SEIZURES:
- Mostly accompanies autism & can usually be controlled with anti -convulsants. Patients may chip teeth or bite tongue or cheeks. Consult patient’s physician regarding frequency of seizures & medications. Be prepared to manage a seizure.

PLANNING DENTAL TREATMENT:
Initial appointment
Communication with the child. Brief examination without instruments. Instruments introduced using a tell show do technique. Same staff should be present every time.

Follow Up Appointments:
Focus on patient's abilities rather than disabilities. Favorite toy can help to take the treatment forward. Patients may exhibit Dyspraxia. Unable to perform task such as opening mouth. When bite blocks fail, a familiar tooth brush handle can be used. Use of physical restraints should be avoided.
- Pharmacological management such as sedation or GA should be the last resort to handle the patients.

AS PEDIATRIC DENTISTS:
We should consider evaluation of all children for signs & symptoms of developmental delays. Recognition & referral to appropriate resources is invaluable to those parents/ care givers who may not otherwise seek out services. Dental professional should build relationship with pediatrician, early intervention specialists, special educational therapists to provide a network of resource for families.

CONCLUSION:
Though awareness and understanding have greatly increased over the past few decades, many people are still unaware of the true affect of Autism. It can become an overshadowing factor in every aspect of life, including education, establishing and maintaining relationships, responding to pain and
discomfort, and even in the ability to express emotion. According to the National Academy of Sciences’ Early diagnosis is crucial because education is the primary form of treatment, and the earlier it starts, the better.” Making a difference in the oral health of person with autism may go slow first, but determination can bring positive results and invaluable rewards.

REFERENCES:
2. Mc Donald RE, Avery D R, Dean JA. Dentistry for the child and Adolescent ( 8 edtn), St.Louis, Mosby, 2004

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