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Original article

# The Presence of Orofacial Manifestations in Autistic Disorders Among Group of Children's Samples in Babil and Najaf cities, Iraq

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**ABSTRACT:**

**Background:** Autism is a kind of disorders that lead to severely failure of ability to communications, interact or adhesion with other child or person and maintain appropriate contact with the outside society or world. Autism is consist of a complex group of

neurobiological disorders caused by defects in developments of child's brain; that usually last throughout a lifetime and are classified as autism spectrum disorders (ASDs). These disorders are associated with hared routines and repetitive behaviors and communications. The aim of this study was to find, the type of communication between orofacial manifestations and autistic disorders.

**Materials and Methods:** Children were selected from private specified centers for autistic disorders and special care in Hilla (Babylon) and Najaf cities of Iraq, by periodic visits. One hundred and twenty(120) subjects were incorporated in this study. All these Childs with age ranges (4.5-10.5) years, and were without any other systemic disease. All these patients were previously diagnosed by psychiatrists.

**Results:** Prevalence of orofacial findings in child with autistic disorders (AD) were: Dental caries (71%), Dry mouth ( xerostomia) (51%), Bruxism (59 %), Delayed tooth eruption (47%), Bad oral hygiene (65%), dental traumatization (52%), Lip chelitis(44%).

**Conclusions:** Oral health may compromise in children with autistic disorders. Oral manifestations of systemic diseases or communications abnormalities; can be found in different conditions. Oral health, may consider as a mirror of general health.

**KEYWORDS:** Oral manifestations; autistic disorders (AD); Dent alveolar findings.

**INTRODUCTION**

Autism is a kind of disorders that lead to severely failure of ability to communications, interact or adhesion with other child or person and maintain appropriate contact with the outside society or world. Autism is consist of a complex group of neurobiological disorders caused by defects in developments of child's brain; that usually last throughout a lifetime and are classified as autism spectrum disorders (ASDs). These disorders are associated with rigid routines and repetitive behaviors. It's

categorized in the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, 4<sup>th</sup> Ed.)<sup>1</sup>.

The beginning of autistic disorders (AD) usually occurs before three years of child's life. Symptoms expression of this disorder is different widely. Parents are important factors and aiding in diagnosing of (AD), as they are usually the first thing to be interest about distribution of the child's behavior: failure of communications, loss of social relationships and imaginative play, and to a lesser extent, impairment of hair and delay in attaining milestones. (The main characteristics

involve difficulties with interaction and communication socially. Early signs and symptoms of ASDs include but are not limited to: 1. No big smiles or other warm, joyful expression by 6 months of age or thereafter. 2. No back-and-forth sharing of sounds, smiles or other facial expressions by 9 months of age [Communication skills]. 3. No babbling by 12 months of age. 4. No back- and - forth gestures such as pointing, showing, reaching or waving by 12 months of age [ motor skills]. 5. No words by 16 months. 6. No two-word meaningful phrases, without modeling or repeating, by 24 months of age. 7. Any loss of speech or babbling or skills at any age. 8. Underdeveloped play skills for a particular age. 9. Oversensitivity to textures. The mean age noted for these deviations is 17 months and the mean age for final diagnosis is 44 months<sup>2</sup>.

Early detection (18-40 months) is very important; as early initiation of educational and behavioral treatment, with long-lasting benefits for these children and their families<sup>3,4</sup>. With possible incidence in autistic disorder, includes: infections, errors and impairment in metabolism, immunology, lead to poisoning, and fetal alcohol syndrome<sup>5</sup>.

The etiology of ASD is a mystery. Highly regarded researchers are of the opinion that there is possible more than one cause since the disorder can have such disparate manifestations. Environmental poisons, Genetics, neurologic psychopathy, dietary deficiencies, and allergies have all been implicated. Pervasive developmental disorders, Rett syndrome, Asperger's syndrome, and degenerative disorders in children are all considered a part of the Autistic spectrum disorder group, but are not always clear the distinction or variations between the various entities. Abnormal levels of serotonin or other neurotransmitters in the brain of children with autistic disorder and may have different irregularities in several brain regions that affect normal development. The etiology and the increased incidence of the various ASDs are scientifically puzzling; different treatment modalities tend to be wide ranging and very much trial and error, especially since there is no cure<sup>6,7</sup>.

Children and peoples with autistic disorders may compromise oral health status or conditions. Commonly used medications and damaging oral habits can cause problems or troubles, the rates of periodontal disease and caries in people with autism are compared with those in the general population may widely

different. The most significant challenges in providing oral care and health that leads to problems in communicational and behavioral apparatus with all worlds<sup>8</sup>. Although the managements of the autistic disorders are mostly behavioral therapies, medications are often prescribed to treat different types of symptoms of autism. These include antidepressants, antipsychotic, anticonvulsant and CNS stimulant drugs. Systemic and oral side effects are presented in those medications; need to be addressed during the dental appointment. Antipsychotic medications may cause motor disturbances that lead to difficulties in the speech and the swallowing and cause xerostomia (dry mouth); as well as orthostatic hypotension. Antidepressants drugs have a lot of side effects that includes: dysgeusia, oral stomatitis and glossitis. One commonly prescribed medication, Fluoxetine, causes buccal sucking, lip-smacking and tongue protruded condition, making oral hygiene are consider as a difficult approach for both these children (patients), and dental hygienist and therapists. Long-term using anticonvulsant medications often administered to autistic patients; may lead to an increase in bleeding tendencies due to leukopenia and thrombocytopenia, or anemic disorders and other blood dyscrasia. Methylphenidate specifically may lead to tachycardia or a hypertension signs if local anesthesia with vasoconstrictors is given. Different antipsychotic medications are used in treatment of patients with multiple disorders may cause masticatory systems difficulties such as muscle stiffness, complete loss of teeth, oral mucosal lesions, temporomandibular joints (T.M.J) problems, and lead to facial pains. Abnormal and excessive involuntary movements of tongue, lips, and jaws are caused by those medications; these conditions are called oral dyskinesia and dystonia<sup>9-11</sup>.

#### MATERIALS AND METHODS:

Children were selected from private specified centers for autistic disorders and special care in Hilla (Babylon) and Najaf cities of Iraq, by periodic visits. One hundred and twenty (120) subjects were incorporated in this study, Informed consent and ethical approval was obtained from children's parents and teachers of these centers. For each subject a questionnaire case sheet was filled out. All these Children with age range (4.5-10.5) years, and were without any other systemic disease. All these patients were

previously diagnosed by psychiatrists. Intra and extra-oral examination for these patients to record all the presence of orofacial manifestations and its severity [dental caries, delayed tooth eruption, dental traumatization, bruxism, bad oral hygiene, lip chelitis, dry mouth (xerostomia)].

## RESULTS

The total numbers of child with autistic disorders were (120), the percentages of orofacial

manifestations as follows (Graphic representation shown in fig. 1).

- Dental caries = 85 out of 120(71%).
- Dry mouth ( Xerostomia) = 61 out of 120(51%).
- Bruxism = 70 out of 120(59 %).
- Delayed tooth eruption = 56 out of 120(47%).
- Bad oral hygiene = 79 out of 120( 65%).
- Dental traumatization = 62 out of 120(52%).
- Lip chelitis= 53 out of 120, (44%).

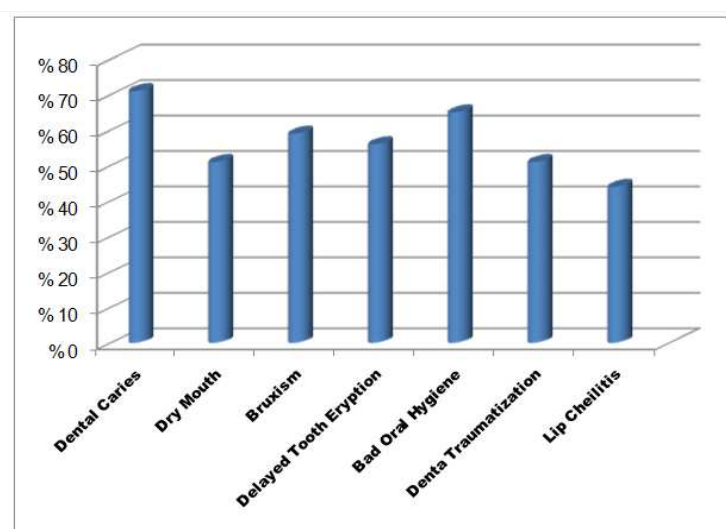


Figure 1. Distribution of orofacial manifestations in children with autistic disorders.

About 51% of the sample had xerostomia (dry mouth) and this could be mainly due to the side effects of drugs used for the management of this disorder such as antidepressant, anticonvulsant and drugs used for the hyperactivity<sup>15</sup>.

This study showed that 59% of sample have visible attrition (bruxism), this result is agreed with other studies<sup>16,17</sup>, and this is considered as one of the sleep problems commonly observed in this disorder<sup>15</sup>. Antidepressants (Fluoxetine and sertraline) used for management of Repetitive Behaviors could result in bruxism as a side effect<sup>10</sup>. More studies are needed to confirm whether bruxism is a unique problem for children with autism.

About 47% of children showed delayed tooth eruption, some studies matched with this result and approved that this due to phenytoin-induced gingival hyperplasia<sup>18</sup>, phenytoin is a drug commonly prescribed for people with autism<sup>19</sup>.

Extraoral examination of the children with autism revealed lip cheilitis in 44% of the sample and this is a common finding in such patients and this could be due to saliva drooling and a bad habit of lip biting<sup>20</sup>.

On examination the ratio of dental traumatization, the results (52%) coincide with those found in other studies<sup>17</sup>. All of these trauma affected teeth in the anterior region and were due to falls that result from walking problems and hyperactivity<sup>15</sup>. In this 65% of children had bad oral hygiene. Dental hygiene tends to be insufficient due to dietary preference, since those show a preference for specific food texture and flavor (e.g. sticky and sweet food)<sup>21</sup> Another contributing factor could be food packing in the mouth for a period of time together with dependency on other people for keeping normal oral hygiene<sup>22</sup>.

## CONCLUSIONS

Oral health may compromise in children with autistic disorders. Oral manifestations of systemic

diseases or communications abnormalities; can be found in different conditions. Oral health, may consider as a mirror of general health. Oral troubles or problems were found in those types of children's.

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