



Clinical Watch

FROM CSAC, THE CLINICAL AND SCIENTIFIC AFFAIRS COUNCIL OF THE AAPA

AUTISTIC DISORDER

Early interventions can improve outcomes

›WHO SHOULD READ THIS?

Any physician assistant who provides care for infants, children, and young adults.

›WHAT IS AUTISTIC DISORDER?

Autistic disorder (AD) or autism is a neurodevelopmental disorder, one of a group of related brain-based disorders known as autism spectrum disorders (ASD). In addition to AD, Asperger's syndrome and pervasive developmental disorders not otherwise specified (atypical autism) are also ASDs and reflect the broad range of clinical characteristics that now define autism.^{1,3}

›WHY IS KNOWING ABOUT AUTISTIC DISORDER IMPORTANT?

All children should be screened for signs of abnormal development at ages 18 months and 24 months. Studies have shown that early diagnosis of AD and appropriate intervention can significantly improve outcomes. In addition, early intervention allows for a more in-depth investigation and preconception counseling regarding the risk for AD in future pregnancies.¹

An understanding of the early signs of AD and knowledge of where to refer patients for further evaluation and safe treatment options is important (see "Table. Autism clinical guidelines" in the online version of this article). Research and media coverage have increased

awareness of AD among the public and health care providers. However, an incredible amount of the information available to families is misleading and/or confusing. PAs can assist with referrals to reputable health care professionals.

›WHAT CAUSES AUTISTIC DISORDER?

The exact cause of AD is unknown, but the generally accepted theory is that the disorder is caused by abnormalities in brain structure or function.^{4,5} Differences in the shape and structure of the brains of children with AD can be seen on MRI.^{4,6} Evidence also supports the role of genetic influences.^{3,7,8} Research suggests that 12 or more genes on multiple chromosomes contribute to disease development.⁸

Environmental factors may play a role. The possible roles of neurologic infections, as well as metabolic and immunologic factors, are also being investigated.³ Some children may be more susceptible to autism, although researchers have not yet identified a clear autism

"trigger." Advanced paternal and maternal age have been shown to be associated with an increased risk of having offspring with AD.^{1,3}

The complexity of the disorder and the fact that no two persons with autism are exactly alike indicate that the etiology is most likely to be multifactorial. Although politically controversial, there is no conclusive scientific evidence that vaccines contribute to autism.^{2,9}

›WHO IS AFFECTED BY AUTISTIC DISORDER?

AD occurs in all racial, ethnic, and socioeconomic groups. Boys are 4 times more likely to be affected than girls.¹ An estimated three to six of every 1,000 children will have autism.⁷ High-risk groups include children with a parent or sibling with an ASD and those with certain other developmental disorders, such as fragile X syndrome.^{7,8}

›WHAT ARE THE SYMPTOMS OF AUTISTIC DISORDER?

The most common signs and symptoms include impaired social behaviors, as well as impaired emotional and communication skills. The child's thinking and learning abilities may vary from mild to severely challenged.^{1,10} Distinctive characteristic behaviors include the following:^{2,3,7}

Impaired social interaction This is the hallmark feature. An infant may be unresponsive to people; often avoids eye contact; or focuses on one item, excluding all else for a long period of time. The child may develop normally and then withdraw and become indifferent. The child may not respond to

TAKE-HOME POINTS

- The complexity of the disorder and the fact that no two persons with autism are exactly alike indicate that the etiology is most likely to be multifactorial. Although politically controversial, there is no conclusive scientific evidence that vaccines contribute to autism.
- General developmental screening should be done for all children at the 9-, 18-, 24- and 30-month well-child visits.
- PAs should have knowledge of community resources and understand how they can assist in making a definitive diagnosis and developing long-term management plans.
- Treatment goals are to maximize the child's ability to function independently, facilitate the best possible quality of life, assist the child with socialization, and educate and support the family unit.

This article was written by **Eileen M. Van Dyke, MPS, PA-C**. Contributors included the other members and staff of CSAC 2008-2009: Daniel L. O'Donoghue, PhD, PA-C, Chair; Gilbert A. Boissonneault, PhD, PA-C; Anthony E. Brennehan, MPAS, PA-C; Alison C. Essary, MHPE, PA-C; Michelle Lynn Heinan, EdD, PA-C; Marie-Michèle Léger, MPH, PA-C; and Robert McNellis, MPH, PA. The manuscript was edited by Sarah Zarbock, PA-C.

his or her name; may prefer not to be held or cuddled; or may misunderstand social cues, such as tone of voice or facial expressions.

Repetitive behaviors or narrow obsessive interests The child may play in repetitive ways or may not play interactively with other children. The child may speak in a singsong voice or only on a narrow range of topics. Other repetitive behaviors include rocking, twirling, or head banging.

Communication Both verbal and nonverbal skills may range from age-appropriate to not speaking at all. The child may use language in unusual ways; for instance, repeating phrases over and over. The child may have difficulty using and understanding gestures or tone of voice.

▶HOW IS AUTISTIC DISORDER DIAGNOSED?

No specific medical test is used to diagnose AD. The disorder is recognized by the behavioral symptoms that may become evident, even in the first few months of life. All children should have an audiologic assessment, a lead screening test, and regular measurement of head circumference. An increase in the head circumference during the first year may be an early warning sign of a risk for autism. Whereas head measurements may be small or normal at birth, an increased rate of growth may be evident, especially from age 1 to 2 months and 6 to 14 months.^{7,11}

A reliable and valid diagnosis can usually be established by age 2 years.⁴ Although many tools are available to assess children for AD, no one tool can

make the diagnosis with absolute certainty. Input from the family and direct observation by the PA are important diagnostic tools.

There are two stages in establishing the diagnosis of AD. The first stage includes developmental screening and surveillance. General developmental screening should be done for all children at the 9-, 18-, 24- and 30-month well-child visits.^{3,4} The second stage is a comprehensive evaluation that may include parent interviews, psychological testing, speech and language evaluation, clinical observations, and use of the AD diagnostic scales. The evaluation may also include physical, neurologic, and genetic testing.^{3,4,12} The *DSM-IV-TR* diagnostic criteria for 299.00 AD requires that the child meet six criteria, with delays or abnormal functioning in two or more areas of social interaction; one area of communication impairment; and one area of restricted, repetitive, or stereotypical behavior patterns; and onset before age 3 years.^{3,13}

▶WHAT TREATMENT IS AVAILABLE?

AD has no cure. Treatment goals are to maximize the child's ability to function independently, facilitate the best possible quality of life, assist the child with socialization, and educate and support the family unit.^{1,11}

Access to community resources is critical for effective management of AD. These resources may include a pediatrician who subspecializes in developmental disorders, occupational and physical therapy, and coordination of behavioral therapy with education- and school-based systems.^{2,10,12} Early intensive therapy can help children reach their full potential. Educational interventions and optimal medical care are important to their long-term care management.^{1,10}

Pharmacologic treatment of AD may include selective serotonin reuptake

inhibitors, antipsychotics, stimulants, and/or anti-anxiety medications. Management is symptomatic and based on the individual patient's condition.^{2,13} Parents may use complementary and alternative medicine (CAM) for a child with AD. Many popular CAM therapies are not supported by appropriate research. In order to educate and support parents' treatment choices, PAs need to ask about CAM use and review the evidence regarding the efficacy and safety of CAM therapies.^{1,11} **JAAPA**

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ON THE WEB

- Table. Autism clinical guidelines

Please see the online version of this article at www.jaapa.com for this enhancement.

TABLE. Autism clinical guidelines

American Academy of Neurology. AAN Screening Guidelines for Clinicians: Screening and diagnosis of autism. http://aan.com/professionals/practice/guidelines/guideline_summaries/Autism_Guideline_for_Clinicians.pdf. Accessed June 8, 2009.

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