Biomedical update:

Tourette may be good sign in autism

Autistic children who also develop symptoms of Tourette syndrome may fare better than most autistic children, according to a recent study by Burd et al.

Researchers who studied 59 individuals with autism or pervasive developmental disorder (which resembles mild autism) found that the 12 subjects in the group who also had symptoms of Tourette syndrome scored higher on IQ tests and had better expressive language skills than the remainder of the subjects.

Tourette syndrome is a disorder characterized by involuntary tics such as eyeblinking, shrugging or lip smacking, and by uncontrolled utterances such as grunting, sniffing, cursing, coughing, or animal sounds. Additional symptoms of Tourette syndrome include short attention span, dyslexia or other learning disabilities, short temper, depression, phobias, and anxiety attacks.

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"Is development of Tourette disorder a marker for improvement in patients with autism and other pervasive developmental disorders?", Larry Burd, Wayne Fisher, Jacob Kerbeshian and Mary Ellen Arnold; *Jour. of the Amer. Acad. of Child and Adoles. Psychiatry*, Issue 2, 1987, pp. 162-165. Address: Larry Burd, Med. Center Rehab. Hospital, Box 8202, University Station, Grand Forks, North Dakota 58202.

Beta blocker tests promising

Beta blockers—a class of drugs commonly used to treat hypertension and angina pectoris—appear to improve the communication and behavior of autistic people, according to a preliminary study by John J. Ratey et al.

The researchers gave propranolol or nadolol (both beta- blocking drugs) to eight autistic adults. They report that dramatic improvement was seen in two subjects, and that all eight subjects had better attention spans and fewer impulsive, aggressive, and ritualistic behaviors.

The researchers say that "six of the eight (subjects) improved their social skills and sought more human contact. They were easier to manage and more willing to join in activities. There was a further marked improvement in their use of language and communicative speech (and) these individuals seemed spontaneously to deepen their awareness of the feelings of others." In some cases, doses of neuroleptic drugs could be reduced or eliminated.

The researchers believe autistic people may experience a chronic state of hyperarousal and that beta blockers may reduce this biologically caused "inner tension."

Ratey and his colleagues emphasize that this was a preliminary study using no control groups, and that more studies are needed to determine if beta blockers are a safe and effective treatment for some autistic symptoms.

Parents should be aware that beta blockers can cause a number of side effects, some of them serious. Parents who have beta-blocking medications at home because of other medical conditions are cautioned against "testing" this medication on their autistic children.

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"Brief report: open trial effects of beta-blockers on speech and social behaviors in eight autistic adults," John J. Ratey, Jules Bemporad, Paul Sorgi, Peter Bick, Steven Polakoff, Gillian O'Driscoll, and Edwin Mikkelson; *Journal of Autism and Dev. Disorders*, Vol. 17, No. 3, Sept. 1987, pp. 439-446. Address: John J. Ratey, 74 Fenwood Road, Boston, MA 02115.

Autism, lactic acidosis linked

The finding that some autistic individuals have lactic acidosis (a condition which indicates an abnormality in the body's use of sugar) raises the possibility that one subgroup of autism could be related to a genetic abnormality in carbohydrate metabolism, according to Mary B. Coleman and John P. Blass.

The researchers studied four patients with both autism and lactic acidosis, a disorder in which lactic acid, formed when cells break down glucose without oxygen, is produced in excess and becomes extremely toxic to the body. They concluded that "the autistic syndrome can be associated with a family of disorders of carbohydrate metabolism, as well as with families of disorders of amino acids, of mucopolysaccharides [complex carbohydrates that are structural parts of connective tissue] and of purines."

Coleman and Blass added that studies of blood lactate and pyruvate (end products of glucose metabolism) should be included in evaluations of autistic children, especially if there is a family history of autosomal recessive inheritance or evidence of motor abnormalities symptomatic of lactic acidosis.

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"Autism and lactic acidosis," Mary B. Coleman and John P. Blass; *Journal of Autism and Developmental Disorders*, Vol. 15, No. 1, March 1985, pp. 1-8. Address: Mary Coleman, 2525 Belmont Road N.W., Washington, D.C. 20008.

Letters to the editor are welcome. Letters intended for publication should not exceed one page in length, and may be edited without consulting the authors. News and notices may also be submitted.

Autism, schizophrenia: is there a connection?

While there has been controversy over whether or not autistic people ever develop schizophrenia, a recent study (Rumsey et al.) concludes that this occurs "rarely, if at all."

The researchers tested 14 adults with documented childhood histories of autism, and 14 adults with schizophrenia. They found that while some symptoms overlapped, several fundamental characteristics—such as the autistic subjects' "poverty" of language and the schizophrenic subjects' "thought derailment" and illogicality—were not common to both groups. All of the adult subjects who had been diagnosed as autistic in childhood still met the criteria for autism or residual-state autism, and none met the criteria for schizophrenia.

However, a different group of researchers (Petty et al.) have reported three case histories of children who originally had many of the features of autism (aloofness, lack of eye contact, echolalia, resistance to change, ritualistic behavior, peculiar attachments to objects, stereotypic movements, etc.) but later developed characteristics of schizophrenia including hallucinations, delusions, altered perception, and illogical speech.

Because the children in the Petty report had some early characteristics not common in autism—communicative speech, borderline to normal IQ, and higher verbal than performance scores on IQ testing—the researchers believe they may constitute a small subgroup within the spectrum of schizophrenia.

Fred Volkmar, however, points out that "there is no reason to suspect that having autism acts to *protect* an individual from schizophrenia, i.e., at least some autistic people might be expected to suffer from a superimposed schizophrenic illness."

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"Thought, language, communication, and affective flattening in autistic adults," J. Rumsey, J. Rapoport, and N. Andreasen; *Arch. of Gen. Psychiatry*, Vol. 43, August 1986, pp. 771-777. Address: Judith Rumsey, Child Psych. Branch, NIMH, Bldg. 10, Rm. 6N240, Bethesda, MD 20892.

—and—

"Autistic children who become schizophrenic," L. Petty, E. Ornitz, J. Michelman and E. Zimmerman; *Arch. Gen. Psychiatry*, Vol. 41, Feb. 1984, pp. 129-135. Address: Leonora Petty, Dept. of Psychiatry, UCLA School of Med., 760 Westwood Plaza, Los Angeles, CA 90024.

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"Annotation: diagnostic issues in the pervasive developmental disorders," Fred R. Volkmar; *Journal of Child Psychology and Psychiatry*, Vol. 28, No. 3, 1987, pp. 365-369. Address: Fred R. Volkmar, Child Study Center, Yale University, P.O. Box 3333, New Haven, CT 06510.