

Accelerated head growth a warning sign for autism?

Abnormal head size and growth during the first months of life could be a clue that a child is at increased risk of developing autism, according to a new study.

Eric Courchesne and colleagues analyzed head circumference measurements from the medical records of 48 autistic children between the ages of two and five. Fifteen children's records included measurements from four age periods between birth and six to 14 months of age, while the other children's records included one to two measurements.

Comparing the children's head sizes and

growth to the norms reported by cross-sectional and longitudinal databases on healthy infants, the researchers found that the development of the autistic children was distinctly abnormal. "Specifically," Courchesne et al. report, "we found a rapid and excessive increase in head circumference measurements, and therefore, presumably, brain size, beginning several months after birth."

At birth, autistic children's head size was only in the 25th percentile (meaning that 75 percent of children have larger heads), while by six to 18 months the autistic children had head sizes in the 84th percentile. Moreover, the researchers report that head growth correlated with severity of symptoms.

They conclude, "The clinical onset of autism appears to be preceded by two phases of brain growth abnormality: a reduced head size at birth and a sudden and excessive increase in head size between 1 to 2 months and 6 to 14 months." Between the second and fourth year brain growth slows, they say, and by the age of five, autistic children have brain sizes similar to those of healthy children, "but about eight years too soon."

Courchesne et al. note that only six percent of healthy infants show accelerated head circumference growth trajectories from birth to six to 14 months, while 59 percent of the autistic children they studied exhibited such growth. The researchers suggest that the rapid head growth is an indication of "growth without guidance," in which the normal development and pruning of brain cells and connections goes awry.

In a commentary on the research, Janet Lainhart notes that rapid head growth is not a phenomenon unique to autism, and cautions that "increased rate of head growth during infancy in autism may be an important concomitant or correlate of autism (i.e., a physical symptom of the disorder) rather than a risk marker."

"Evidence of brain overgrowth in the first year of life in autism," Eric Courchesne, Ruth Carper, and Natacha Akshoomoff, *Journal of the American Medical Association*, Vol. 290, No. 3, July 2003, 337-44. Address: Eric Courchesne, Center for Autism Research, 8110 La Jolla Shores Drive, La Jolla, CA, ecourchesne@ucsd.edu.

—and—

"Increased rate of head growth during infancy in autism," J. E. Lainhart, *Journal of the American Medical Association*, Vol. 290, No. 3, July 2003, 393-4. Address: Janet Lainhart, University of Utah, 20 North 1900 East, Salt Lake City, UT 84132-3401, janet.lainhart@hsc.utah.edu.

—and—

"Accelerated rate of brain growth in infants may be early warning sign of autism risk," news release, American Medical Association, July 15, 2003.

Drug warnings issued

The Food and Drug Administration (FDA) has asked manufacturers of six antipsychotic drugs often given to autistic children to provide warnings that the drugs increase the risk of elevated blood sugar and diabetes. The drugs are Zyprexa (olanzapine), Risperdal (risperidone), Clozaril (clozapine), Abilify (aripiprazole), Seroquel (quetiapine fumarate), and Geodon (ziprasidone). The warning follows a series of studies linking atypical antipsychotics to an increased risk of diabetes or elevated blood glucose (see ARRI 16/4 for related article), including a recent study reporting that nearly 25 percent of 121 schizophrenic patients taking Clozaril developed high blood glucose levels that put them at risk for developing diabetes.

In a separate report, the FDA warned that the antidepressant paroxetine (Paxil), frequently prescribed for autistic children and teens, could triple the risk of suicidal thoughts or actual suicide attempts in children. The FDA now recommends that no one under the age of 18 be given paroxetine for depression. This warning follows an even stronger warning by the British government's Medicines and Healthcare Products Regulatory Authority (MHRA), which also is calling for an end to the use of paroxetine (sold under the brand name Seroxat in the UK) for pediatric patients and asking for an "urgent examination" of the drug's possible risks to adult patients.

The FDA noted that three trials in pediatric patients with major depressive disorder failed to show that paroxetine was more effective than a placebo. However, Dr. Russell Katz of the FDA stated, "There is no definitive action or even decision about what ought to be done" in response to the research, adding, "we wanted to let people know."

Shortly after the FDA issued this warning, Wyeth, the manufacturer of Effexor (venlafaxine), issued a similar warning that Effexor is not effective in pediatric patients and could increase the risk of hostility and suicidal thoughts and behavior.

Editor's note: It is ironic that the FDA often uses the full force of its power against individuals or firms selling completely harmless and highly beneficial nutritional supplements, yet cannot decide on a "definitive action or even decision" when it comes to Paxil, a dangerous drug that is now shown to be worthless for treating children.

"FDA statement regarding the antidepressant Paxil for pediatric population," FDA news release, June 19, 2003, and "Questions and answers on Paxil," <http://www.fda.gov/cder/drug/infopage/paxil/paxilQ&A.htm>.

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"Britain says Glaxo's Seroxat not safe for children," Reuters, June 10, 2003.

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"FDA seeks diabetes warning on antipsychotic drugs," Reuters, September 17, 2003.

Report on autism 'plateau' greeted with skepticism

A new study reporting that the autism epidemic has "plateaued" is questioned by experts who note that the data are contradicted by all other recent large-scale studies.

Brent Taylor and colleagues recently reported that the number of cases of autism occurring in five districts in northeast London had increased until 1992, and has leveled off since that time. The researchers conclude, "The prevalence of autism, which was apparently rising from 1979 to 1992, reached a plateau from 1992 to 1996 at a rate of some 2.6 per 1000 live births."

Responding to the study, F. Edward Yazbak says that "it would be wonderful indeed" if the findings were true, but notes that multiple recent studies from around the world instead show that the autism epidemic is intensifying. For instance, he notes:

- A study in Cambridgeshire, UK in 2001 found that one in 175 schoolchildren in the area is autistic (5.7 per thousand live births).

- U.S. Department of Education statistics show a massive increase in the number of autistic children enrolled in school—from 28,813 in 1995-96 to 97,847 in 2001-2.

- In California, cases of autism increased by 31 percent in the last year alone, and cases of Type I autism increased by 97 percent in the past four years compared to only 16 percent for cerebral palsy and 29 percent for mental retardation.

- Quebec reported 1,391 autistic children enrolled in schools in September 2000. By September 2002, the number had increased to 2,302.

Moreover, the U.S. Centers for Disease Control and Prevention reported in 2002, after conducting a large-scale epidemiological study, that the rate of autism has soared from 4 or 5 per 10,000 in the 1970s to 34 per 10,000 today (see ARRI 16/4). Similarly, the M.I.N.D. Institute in California concluded in 2002 that the autism epidemic is real and cannot be explained by greater awareness of au-

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