Brief Scale Assesses Core Symptoms of Autism

BY DAMIAN McNAMARA
Miami Bureau

BOCA RATON, FLA. — Severity of autism core symptoms and monitoring of improvements with treatment can be measured with a brief 10-item scale developed by researchers at Ohio State University, Columbus, according to a study presented at a meeting of the New Clinical Drug Evaluation Unit sponsored by the National Institute of Mental Health.

"We don't have a good brief scale to assess core symptoms of autism," Eric M. Butter, Ph.D., of the pediatrics department at Ohio State, said in an interview at his poster presentation. Although effective treatments for autism have been few, some pharmaceutical agents appear promising, which increases the need for a quick assessment of treatment response, he added. The scale measures response to pharmaceutical and social interventions.

Dr. Butter and his associate James A. Mulick, Ph.D., a professor of pediatrics and psychology at the university, developed the Ohio Autism Clinical Impressions Scale (OACIS) as a symptom-specific version of the Clinical Global Impressions scale. They tested the OACIS's reliability with physicians and psychologists, and compared results with teacher ratings.

In addition to one item that rates global severity of autism, the scale measures impressions about the following nine core symptoms: social interaction, aberrant behaviors, repetitive behaviors, verbal communication, nonverbal communication, hyperactivity, anxiety, sensory sensitivity, and restricted, narrow interests. The rater scores each item on a scale of 1 to 7, with a higher number reflecting greater severity.

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A total of 31 children being assessed for an initial diagnosis of pervasive developmental disorder made up the clinical sample assessed by physicians or psychologists. An additional 37 children were assessed by teachers at a specialized school for children with autism spectrum disorders. The children's mean age was 8 years; 62% were diagnosed with autism and 38% with pervasive developmental disorder.

The researchers found a 0.71 interrater reliability in the clinic sample and 0.52 in the school-based group. "Doctors and psychologists agreed better than the teachers did," Dr. Butter said at the meeting, cosponsored by the American Society for Clinical Psychopharmacology. A reason for the disparity, he speculated, is that "the teachers had broader experience with the children, whereas pediatricians and psychologists were seeing them at the same time."

Initial findings suggest internal reliability and test-retest reliability were strong. Specifically, internal reliability was 0.92 for the clinical raters and 0.94 for the teachers. Raters repeated the test with a subgroup of the children 1 week later; the test-retest reliability was 0.91 for the clinicians and 0.96 for the teachers.

To test the validity of OACIS, the researchers also tested all participants with the Gilliam Autism Rating Scale (GARS), the Aberrant Behavior Checklist (ABC) irritability subscale, and the Pervasive Developmental Disorders Behavior Inventory (PDDBI). They found that the OACIS total score had a 0.75 correlation with the GARS, 0.57 with the ABC-I, and 0.63 with the PDDBI.

Some of these correlations were surprising, Dr. Butter said. "I'm concerned about the high validity with the GARS—one of our goals is to replace this. I have to figure out why they correlated so well." He was happy with the lower correlation with the ABC-I. "I wanted it to be divergent because only some kids with autism have irritability."

The low correlation with the PDDBI was expected, because it is a comparison of a 180-item scale with a 10-item measure, Dr. Butter said.

Data collection is ongoing about how well the OACIS assesses response to pharmacologic or social interventions for autism, Dr. Butter said. Preliminary findings suggest the "improvement index did well, too." The index had a 0.78 correlation with a language "learning rate" variable devised by the researchers.

"With Risperdal, it will be interesting to see if the scale picks up changes from this medication, as well as other medications in development for core symptoms," Dr. Butter said. ■

Autism Symptoms at 18 Months Predict Dx at Age 3

BY ROBERT FINN
San Francisco Bureau

SAN FRANCISCO — Eighteen-month-old children who scored above the threshold for autism spectrum disorders on the Autism Diagnostic Observation Schedule were more than six times as likely to have a clinical diagnosis of autism spectrum disorder at the age of 3 years than those who scored lower, Dr. Lonnie Zwaigenbaum reported in a poster presentation at the annual meeting of the Pediatric Academic Societies.

Nevertheless, scores on the Autism Diagnostic Observation Schedule (ADOS) must be interpreted with caution in children who are 18 months old, wrote Dr. Zwaigenbaum of McMaster University, Hamilton, Ontario, and his colleagues. ADOS scores should be interpreted in the context of an overall clinical assessment, because the test has a high sensitivity but a relatively low specificity, missing more than 50% of the children with diagnoses at 3 years.

The study involved 101 children who were at increased risk of autism by virtue of having an older sibling with autism. Also included in the trial were 42 control children with no increased risk of autism.

The children were assessed with ADOS and the MacArthur Communicative Development Inventory at the average age of 18 months, and they received a blinded diagnosis by an expert clinician at an average age of 39 months.

This diagnosis was based on the clinician's best judgment after a comprehensive assessment that included the ADOS, the DSM-IV, and the Autism Diagnostic Interview–Revised. The ADOS scoring algorithm includes one cutoff score for autism spectrum disorders (ASDs) and a higher cutoff score for autism. Only one of the control children scored in the ASD range at 18 months, but that child was not in the ASD range at 24 months and did not have a diagnosis of ASD at 3 years.

Using the autism cutoff, the 18-month assessment identified 9 of 20 children who ended up with a clinical diagnosis at 3 years (sensitivity of 45%) and 6 of 81 children who did not receive a diagnosis at age 3 (specificity of 93%).

With the less-stringent ASD cutoff, the 18-month assessment identified 16 of 20 children who ended up with a clinical diagnosis at 3 years (sensitivity of 80%) and 23 of 81 children who did not (specificity of 72%). The relative risk of a clinical diagnosis at 3 years given a score above the ASD cutoff at 18 months was 6.4, which was statistically significant.

There were four false negatives: children with clinical diagnoses at 3 years who scored below the ASD cutoff at 18 months. Two of these children had very low scores—0 and 1 on the ADOS, in which the ASD cutoff is a score of 7. One of those children deteriorated markedly by 24 months and was diagnosed with autism. The second child had more slowly progressing impairments between 18 and 36 months, and his ADOS score at 24 months was still below the ASD cutoff.

More longitudinal research is needed to better understand the sources of disagreement between the diagnostic assessments, the investigators said. ■

Access to Specialists More Likely to Elude Children With Autism

SAN FRANCISCO — Children with autism are significantly less likely to have a medical home, compared with children without autism and also compared with children who have other special health care needs, according to data from a large national survey presented in a poster at the annual meeting of the Pediatric Academic Societies.

Dr. Dana Hargunani and her colleagues from the Oregon Health and Science University, Portland, analyzed data from the National Survey of Children's Health, which was administered to more than 100,000 U.S. households in 2003 and 2004 by the National Center for Health Statistics.

For the purposes of this study, the investigators considered a child aged 0-17 years to have a medical home if he or she has a personal doctor or nurse who spends enough time and communicates well with the parent and child, and if the child had at least one preventive medical care visit during the previous 12 months. Additional criteria for determining whether a child has a medical home included whether the child usually or always gets needed care and advice from the personal doctor or nurse and is consistently able to access needed specialist care.

One-half of 1% of the children whose parents were surveyed were reported to have autism. Of those, 25.6% were reported to have a medical home, a significantly smaller percentage than the 46.3% of children without autism and the 44.7% of children who have other special health care needs.

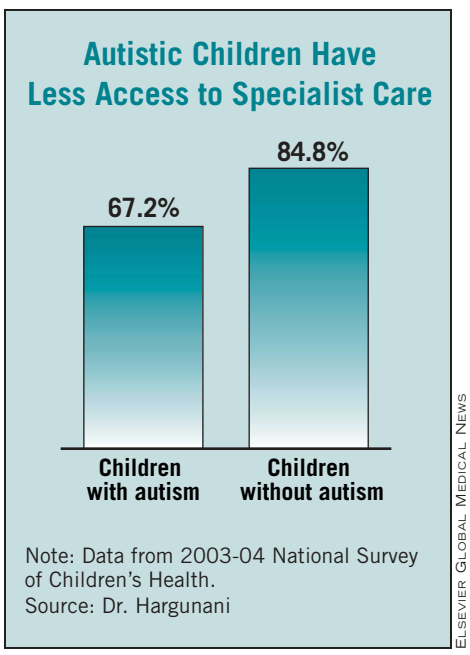
Parents of autistic children also reported significantly less access to specialist care—67.2% compared with 84.8% of children without autism and 79.4% of children with other special health care needs.

Autistic children were significantly less likely to have the benefit of care coordination, compared with children without autism (45.4% vs. 58%). A similar comparison between autistic children and children with other special health care needs showed no statistically significant difference.

"Children with autism face significant barriers to the receipt of health care they need and deserve," wrote the investigators. Physicians "must address this disparity by further investigating the underlying challenges for families with autistic children."

The meeting was sponsored by the American Pediatric Society, Society for Pediatric Research, Ambulatory Pediatric Association, and American Academy of Pediatrics.

—Robert Finn



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