Biomedical/Education Update:

Antidepressant drug tested for self-injury

The antidepressant drug Trazodone may reduce self-injury and aggression in retarded and autistic individuals, according to a report by Canadian researcher A. Gedye.

Gedye tested Trazodone (250 mg daily) on a 17-year-old male with severe mental retardation and autism. The 6-foot-four-inch, 214-pound teenager required full-time supervision because of his daily hitting episodes. "When not actually hitting himself, others, and objects," Gedye says, "he was in almost constant motion."

Treatment resulted in a 79% reduction in minutes of aggression compared to baseline, and a similar reduction in self-injury. These behaviors increased when the drug was withdrawn.

Gedye notes that several other studies indicate that Trazodone is effective against self-injury and/or aggression in persons with mental retardation, dementia, or organic brain disorders.

A significant advantage of Trazodone, he notes, is that it does not cause tardive dyskinesia (a neurological disorder causing involuntary muscle movements), as many of the major neuroleptic drugs do.

Gedye notes that the major effect of Trazodone is on levels of serotonin, one of the brain's natural "messenger" substances. High levels of serotonin have been found in approximately one third of autistic individuals. Gedye notes that at low doses Trazodone acts as a serotonin antagonist, while at high doses it has the opposite effect.

"Physicians obtaining benefit at low doses," he cautions, "might find it counterproductive to use high doses."

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"Trazodone reduced aggressive and self-injurious movements in a mentally handicapped male patient with autism," A. Gedye, *Journal of Clinical Psychopharmacology*, Vol. 11, No. 4, August 1991, pp. 275-276. Address: A. Gedye, Psychology Department, Woodlands, 9 East Columbia Street, New Westminster, B.C., V3L 3V5, Canada.

Functional communication passes "test of time"

Studies show that teaching autistic children to obtain what they want through language rather than through bad behavior — a technique known as "functional communication training" — can greatly reduce aggression, self-injury, and other behavior problems (see ARRI 3/4). Now a study by V. Mark Durand and Edward G. Carr indicates that the effects of such training can be long-lasting, even when children are placed in new classrooms with new teachers.

Durand and Carr worked with three minimally verbal autistic or autistic-like boys, ages nine to 12, who had severe tantrums, self-injury, screaming, face slapping, disruptive laughing, and/or aggressive behaviors.

Both teacher evaluations and separate analyses done by the researchers indicated that two of the students misbehaved to escape from difficult tasks, while the third misbehaved both to escape tasks and to gain attention. The researchers trained the children to ask for help with difficult tasks by saying "I don't understand," or "help me," and taught the third student to ask for attention by saying, "Am I doing good work?"

Durand and Carr report that once the children learned to request attention or help, their behavior problems dropped substantially. In addition, follow-up evaluations over the next 18 to 24 months showed that the improvements were generally lasting. (One child regressed, but after a brief re-training session his behavior problems dropped and remained at low levels.)

"It is significant," the researchers say, "that the results of our intervention transferred to teachers who were unaware of and untrained in the procedures" the students had been taught.

The researchers stress the advantage of using an intervention that transfers easily to new settings and people. "Some interventions are not likely to be encountered outside of specially designed environments," they say. For example, "A student who hits herself at fast-food restaurants because she has difficulty with purchases will probably not receive reinforcers by the cashier [for refraining from such behavior]. However, it is likely that she will receive help if she asks for help in counting the change. This should in turn reduce the probability of her slapping her face, without special training of the intervention agent."

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"Functional communication training to reduce challenging behavior: maintenance and application in new settings," V. Mark Durand and Edward G. Carr, *Journal of Applied Behavior Analysis*, Summer 1991, 24, 251-264. Address: V. Mark Durand, Department of Psychology, State University of New York, 1400 Washington Avenue, Albany, New York 12222.

Correction:

In ARRI 5/3, the article "New report on holding therapy" should have made it clear that the treatment used by Zappella et al. in the study cited was a variation of holding therapy known as "ethologically oriented familial therapy," which includes holding procedures and other therapies. The cited article by British researchers Dawn Wimpory and Victoria Cochrane, while critical of earlier reports by Zappella et al. on holding therapy, approved of the evaluative methods used in the newest Zappella studies on ethologically oriented familial therapy.

Parents' stress may affect usefulness of home training

Research shows that parents of autistic children often are excellent teachers, and that combining structured schooling with home training by parents can greatly increase an autistic child's progress. But is this always a good approach?

Frank Robbins and colleagues recently studied the progress of 12 autistic children whose mothers had received intensive training in behavior management and instructional techniques. Tests administered to the children and their mothers at admission to the program and one year later indicated that:

—All mothers reported that their children were significant sources of stress.

—Scores on stress measures *not* related to their children's disability (such as "social isolation," "relationship with spouse," and "parent health") were significantly higher for some mothers than for others. Children of the mothers with *low* stress scores in these areas made very good progress during the year. Children whose mothers had *high* scores in these areas did poorly compared to the high achievers.

"All mothers in the low improvement group had [stress measurement] scores that would be considered to be clinically elevated," the researchers say, "while none of the mothers in the high improvement group scored above the cutoff."

Robbins et al. note that children in the high improvement group all had intact two-parent families, while the majority of children who made less progress came from one-parent families. The stress of being a single parent, combined with "financial concerns, cultural differences, marital interactions, or stress related to any number of external forces may affect the process or objectives of parent training and family-based intervention," they say.

Robbins and colleagues say there may be an "important message" in their research: that some parents are in a better position than others to serve as therapists, and that "it is probably unreasonable for service providers and parent trainers to expect all parents to assume a role that extends beyond the normal challenges of parenthood." Parents experiencing a great deal of stress, they say, might be better served by respite care, support groups, financial aid and other stress-relieving programs than by parent training programs.

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"Family characteristics, family training, and the progress of young children with autism," Frank R. Robbins, Glen Dunlap, and Anthony J. Plienis; *Journal of Early Intervention*, Vol. 15, No. 2, 1991, pp. 173-184. Address: Frank Robbins, Dept. of Child & Family Studies, FL Mental Health Institute, University of South Florida, 13301 Bruce B. Downs Blvd., Tampa, FL 33612-3899.