

Risperidone for autism, PDD: positive findings reported

A new test of risperidone suggests—as have several earlier studies—that the drug has fewer dangerous side effects than other drugs commonly used to treat autism, and also may be more effective in controlling serious aggression, self-injury, and ritualistic behavior.

In a non-placebo-controlled clinical trial, Christopher McDougle et al. administered risperidone to two adult men with autism and one adult woman labeled as having “pervasive developmental disorder not otherwise specified” (PDD-NOS). In all three cases, they note, the drug resulted in marked improvement. The patients had previously been treated with multiple neuroleptic drugs, with little benefit. McDougle et al. outlined the changes seen in each subject:

—“Patient A,” a 20-year-old autistic man, was admitted to McDougle’s inpatient research unit from an emergency room after he attacked his mother with a fire poker. When admitted, he was put on thioridazine, clomipramine, and lorazepam. “[He] remained agitated,” the researchers say, “subsequently striking [a] patient, kicking a trash can across his room, and throwing a billiard ball at another patient.” The man was started on risperidone (6 mg daily), and has had no further aggressive episodes over the course of a year. He was weaned off all other drugs, and has experienced no significant side effects from the risperidone.

Before beginning risperidone treatment, the researchers say, the man hoarded playing cards, watched TV “infomercials” obsessively, and would wear only clothes that advertised a local department store. Once the man’s risperidone dosage was stabilized, they say, “he reduced his hoarding of playing cards, tolerated removal of the cable television service, and wore a variety of shirts.” In addition, McDougle et al. say, the man began initiating social interactions.

—“Patient B,” a 44-year-old woman with PDD-NOS, was referred to McDougle and colleagues because of her aggression, inappropriate social interactions, and agitation, as well as her obsessions with astrology and war. She had been treated with numerous neuroleptic drugs, but none were effective.

“During the two years prior to admission,” the researchers say, “Patient B had become increasingly aggressive toward her parents. She destroyed property in their home, and two months prior to admission, hit her father and later pushed her mother down the stairs.”

Patient B showed no improvement on risperidone initially, but the researchers say that once her dosage was increased to 8 mg daily, “she began to attend patient groups on the unit, demonstrated more appropriate social interaction and improved eye contact, and showed no further aggressive behavior.” They add that “she continued to enjoy thinking about astrology and historical battles, but these thoughts were no longer all-encompassing, and she no longer dominated conversations with others with these topics.” The woman’s behavioral improvements have

lasted for 15 months, and she has experienced no side effects from the drug.

—“Patient C,” a 31-year-old man, was referred because his self-injury, aggression, and repetitive behaviors made it impossible for him to function in a sheltered workshop. “He would frequently strike his ears with his fists,” McDougle et al. say, “and attempt to bang his head against the floor and walls. His ears were misshapen due to this repetitive self-injury.” He was socially withdrawn,

McDougle et al. report that all three of their violent, self-injurious patients reduced or ceased their dangerous behaviors when risperidone was administered. In addition, they became more sociable and exhibited fewer compulsive or ritualistic behaviors.

and had many rituals including shutting all of the doors in the clinic, compulsively straightening pictures, and piling up magazines in symmetrical stacks. At the time of his admission, his group home staff reported that he was restrained up to 10 times a day to preventing aggression or self-injury.

When the man was given 2 mg per day of risperidone, the researchers say, “within 3-4 days, staff reported a marked reduction in repetitive behavior.... He began to vocalize to gain the attention of others, and his mood appeared brighter. Rather than isolating in his bedroom during the day, [he] began attending half-days at a sheltered workshop and eventually was able to engage in full-time work for five days a week.” The man no longer attacks other people, and his head-banging and ear-hitting occur only one or two times a month. After one year on the drug, no side effects have been seen.

Few studies done to date

McDougle et al. note that risperidone affects both dopamine and serotonin receptors in the brain, and say their findings “are consistent with previous evidence suggesting that serotonin and dopamine neurotransmission may be relevant to the treatment and possibly the pathophysiology of some symptoms of pervasive developmental disorders.” They also note that previous research suggests that risperidone has fewer serious side effects than haloperidol and other neuroleptics. They caution, however, that their study involved a small sample and was not placebo-controlled.

Few other studies of risperidone’s effect on autistic behaviors have been conducted. R. Vanden Borre et al. reported in 1993 that mentally retarded patients showed less self-injury, “autistic” behavior, hostility, aggres-

sion, irritability, agitation, and hyperactivity when treated with the drug. Paul Lombroso tested risperidone on subjects with Tourette syndrome, and found that it reduced tics and obsessive-compulsive behaviors (see ARRI 9/4). And Scot Purdon and colleagues reported that risperidone reduced stereotypical behaviors and improved memory in two men with PDD (see ARRI 8/4).

Side effects noted

Despite its reputation for safety, risperidone—a relatively new drug commonly used to treat schizophrenia—does cause side effects in some subjects. Common side effects include menstrual irregularities, weight gain, abnormal breast enlargement in males, heart palpitations, constipation, fatigue, low blood pressure, and mild postural hypotension (dizziness upon standing). At high doses, extrapyramidal symptoms including muscle stiffness and body tremors may occur, but this side effect is less common than with other neuroleptics.

To date, ARRI has received only one report from a parent whose son was treated with risperidone. This individual was taken off the drug because it caused severe side effects. One recent report in the medical literature regarding the use of risperidone for non-autistic patients suggests that combining risperidone with phenytoin can result in severe side effects.

Editor’s Note—As long-time ARRI readers know, I am *not* a fan of drug treatments for autism or “pervasive developmental disorder.” ARRI recommends nutritional therapies and behavior modification as “first-line” approaches for behavioral problems. However, I am aware that when other treatments fail, drug treatments can sometimes reduce dangerous aggression or self-injury. Thus, ARRI will continue to report extensively on new drug treatments for autism. In particular, we will follow studies on risperidone closely to see if the drug lives up to its initial reputation as being safer and possibly more effective than other drugs commonly used to treat autism. We would be interested in hearing from parents and professionals who try this treatment for autistic individuals.

“Risperidone in adults with autism or pervasive developmental disorder,” Christopher J. McDougle, Edward S. Brodtkin, Paul P. Yeung, Susan T. Naylor, Donald J. Cohen, and Lawrence H. Price; *Journal of Child and Adolescent Psychopharmacology*, Vol. 5, No. 4, 1995, pp. 273-282. Address: Christopher J. McDougle, Clinical Neuroscience Research Unit, Abraham Ribicoff Research Facilities, Connecticut Mental Health Center, Department of Psychiatry, Yale University School of Medicine, New Haven, CT 06510.

—and—

“Drug interaction between risperidone and phenytoin resulting in extrapyramidal symptoms,” Diana R. Sanderson; *Journal of Clinical Psychiatry*, 57:4, April 1996. Address not listed.