Diet drug may help autism

New research indicates a drug called fenfluramine might help autistic children by lowering blood levels of serotonin, a chemical messenger thought to be connected to autistic symptoms.

Edward Geller and colleagues at the Veterans Administration Brentwood Medical Center in Los Angeles report in the July 15 NEW ENGLAND JOURNAL OF MEDICINE preliminary results in which fenfluramine significantly improved social behavior and IQ in three autistic boys.

Forty percent of autistic children have high blood serotonin levels, and researchers have long suspected the neurotransmitter might be responsible for the clinical symptoms of the disorder. Roland D. Ciaranello, associate professor of psychiatry at Stanford University and author of an NEJM editorial commenting on Geller's study, told SCIENCE NEWS, "The significance of this drug [fenfluramine] is that it's counteracting a biochemical abnormality. These kids have elevated serotonin levels and they're autistic. You reduce their serotonin and they get better."

Autism is a neurological disorder affecting five out of every 10,000 infants. The most striking symptom of the disorder is the child's aloofness. Autistic children don't respond to affection and tend to isolate themselves. They have trouble with speech, do poorly on IQ tests and have motor disturbances. According to Ciaranello, there is no cure for the disorder and treatment results are dismal. He said drugs used today are tranquilizers that temporarily relieve symptoms of hyperactivity and antisocial behavior.

Geller's group started their study with a 3-year-old autistic boy. After treating him with fenfluramine for two weeks, the researchers noted an improvement in social behavior. Behavior was recorded using the Ward Symptom Rating Scale, in which trained observers watched test subjects and numerically rated behavior involving social and motor activity.

Encouraged by the results with the first boy, Geller's group gave fenfluramine to two more severely autistic boys for a much longer period of time. According to their report, both boys showed significant improvement in IQ and social behavior. One of the boys tested nearly doubled his IQ over the course of the experiment. Arthur Yuwiler, chief of Neurobiochemical Research at the Veterans Administration Brentwood Medical Center and one author of the report, said the boys were tested again three months after treatment was stopped. Yuwiler said the autistic symptoms had returned. He also said the Brentwood group has given fenfluramine to two more autistic children — girls this time. He said both girls seem to be improving.

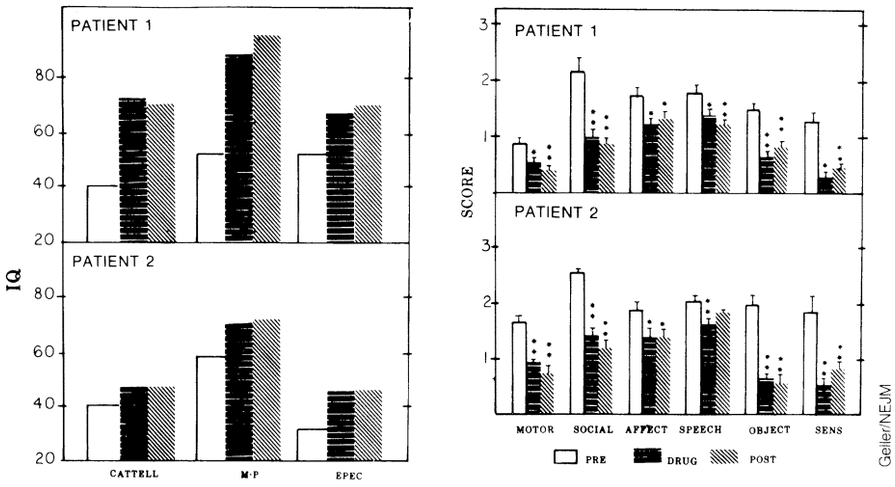

Chart at left shows IQ doubling for patient 1 after fenfluramine treatment. Chart at right shows improved social behavior; high scores indicate greater pathology.

Said Daniel X. Freedman, chairman of Psychiatry at the University of Chicago and president of the American Psychiatric Association, Geller's results are noteworthy despite the fact that so few autistic children have been tested. He said, "That amount of change in autistic patients is startling to those who have been following this issue at all."

However, Yuwiler said, "We don't know if it will work on all autistic kids." While Geller's study implies that fenfluramine helps autistic symptoms by lowering serotonin levels, there is a chance it might work by an entirely different mechanism.

Even if research proves that fenfluramine works effectively, there are still questions about the drug's safety. Fenfluramine has been tested and is apparently safe as a weight-control drug for adults but no one knows how it will affect growing children.

—K.A. Fackelmann

NGRI: Equal crime, unequal confinement

There was a time when defense attorneys used to counsel their clients against entering an insanity plea, because as criminally insane patients they were apt to spend more time confined to a mental hospital than they would, as convicts, spend in the penitentiary. That may no longer remain good counsel. According to a recent study comparing a group of criminally insane patients to a group found guilty of identical crimes, male patients tend to be institutionalized for considerably less time than are male prisoners. And despite their relatively rapid rehabilitation and release, those found not guilty by reason of insanity (NGRI) are just as likely as convicted criminals to be rearrested when returned to society.

The study was reported in the July AMERICAN JOURNAL OF PSYCHIATRY by psychologists Richard A. Pasewark and Mark L. Mantle of the University of Wyoming and Henry J. Steadman of the New York State Department of Mental Hygiene. The researchers compared the histories of 50 men and women acquitted (as insane) of a serious crime, usually homicide, with the histories of 50 matched controls — men and women imprisoned for their crimes. They found that the 42 men who were acquitted and hospitalized spent an average of 533 days in confinement, while the 42 controls were imprisoned for an average of 837 days. There was no significant difference among the women. All prisoners served at least one year, while patients were hospitalized as briefly as one day.

The subjects of the study were all tried in New York State after the summer of 1971, when the state transferred responsibility for the criminally insane from the prisons to the mental hospitals; with that change in the law, the number of people acquitted by reason of insanity increased six fold. Interestingly, a comparable study conducted by the same researchers before 1971 had found no difference in length of institutionalization. With the change in law, the period of confinement for the hospitalized criminally insane dropped 48 percent compared with 16 percent for those imprisoned. The authors warn against the "simplistic conclusion" that the mental health system is "soft" on the criminally insane, but speculate that release decisions may now be based more on therapeutic considerations and less on the seriousness of the patient's crime.

The researchers also report that the patients, once released, are just as likely as released prisoners to be rearrested — often repeatedly. But there is also a significant group of former patients who are repeatedly rehospitalized — without being subsequently arrested. These findings, the authors say, suggest that the insanity plea may be used by two discrete subgroups — one mentally ill and in need of treatment and the other chronically criminal and culpable.

—W. Herbert