

# "Case study suggests new therapy for autism"

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In recent years autism has been the focus of much attention. Parents worry about identifying the disorder in their children at a young age.

Scientists puzzle over the combination of biological and environmental factors that lead to autism, as well as how best to treat this enigmatic condition.

A new case report suggests an intriguing new approach for correcting some of the most severe behavioral problems associated with autism.

Autism is a developmental disorder that is characterized by deficits in language, social and behavioral skills. Autism represents a broad spectrum of disorders that range from mild to severe. A particularly severe symptom includes self-injury, or the act of hitting oneself so that it leads to tissue damage.

Many symptoms of autism are treated through medications or behavioral approaches. Both approaches often work well for individuals and have even proven effective in preventing self-injury.

Lee Wachtel of the Kennedy Krieger Institute presented a case report of an eight-year-old autistic boy with severe self-injury behaviors that were not responsive to treatment in a recent journal article.

Wachtel collaborated with colleagues at Hopkins Hospital and the University of Mississippi Medical Center, and they proposed the controversial treatment of electroconvulsive therapy (ECT) in this case.

They report that this boy, known as D., maintained self-injurious behaviors despite many different medical and behavioral interventions. This boy often was restrained with padded equipment to prevent serious injury from occurring. However, he still attempted to make hitting movements while restrained.

When observed without restraints over a 24-hour period, D. was reported to have hit himself in the head an average of 109 times per hour. Because of the high frequency of self-injury incidents, D. was unable to participate in structured school programs or family activities.

D.'s physicians felt that this damaging behavior might be ameliorated through ECT. ECT maintains a link with the shock therapy of early psychiatry, which was used on patients with a variety of mental illnesses.

ECT is still widely used as a treatment for severe depression. Wachtel and colleagues report that ECT has been successful in improving self-injurious behaviors in patients with mental illnesses, yet it is not often used in young children.

Wachtel and colleagues were able to successfully treat D. with ECT, resulting in a large decrease in the amount of self-injurious incidents per hour. He dropped from 109 hits per hour to 19. This drastic decrease allows D. the possibility of an improved quality of life. He is able to attend educational programs, behavioral therapies and family activities.

A main cause of concern for children exhibiting this behavior is the risk of a head or brain injury, which could possibly be life-threatening. Without ECT treatment, D.'s only options were to remain confined by padded restraints or to risk severe injury.

ECT was administered three times a week for a period of five weeks. In each administration, D. was given an anesthetic and muscle relaxant before the therapy commenced.

D. received bilateral treatment, which means that one electrode was placed on either side of the head. Electrical impulses flow through the electrodes and into the brain.

While the exact mechanism of how ECT works is not known, the authors postulate that several neurotransmitter systems may be affected. These systems may help reverse some of the characteristic behaviors of autism.

Wachtel notes that this is the first documented case of a young autistic child who successfully improved self-injury behaviors after receiving ECT.