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New Pediatric Research Offers Hope for Children with Epilepsy and Their Families

BOSTON, Mass., December 6, 2009—Of the 50 million people worldwide with epilepsy, more than half develop the condition in childhood. The primary goal of epilepsy treatment is seizure control, but improving health-related quality of life and treating co-morbidities is equally a part of managing the disorder. Three new pediatric epilepsy studies, reported today at the 63rd meeting of the American Epilepsy Society, show that it is possible for children with epilepsy to have a quality of life similar to other children and also have better lives when given optimal care.

Most health-related quality of life (HRQL) studies in children with epilepsy focus on small groups and selected subgroups—such as children with intractable seizures—and produce a one-time snapshot of HRQL outcomes. In a longitudinal study of 374 families across Canada, HRQL data were gathered for children ages 4 to 12 with new-onset epilepsy. Child health questionnaires were completed by parents post-diagnosis, and 6, 12 and 24 months later. Results from this multi-center study of patients treated by 53 pediatric neurologists across Canada are encouraging. Although health-related quality of life was compromised initially post-diagnosis, the investigators report that it improves significantly over the next 2 years to levels close to those reported for healthy children.

Ten percent of children diagnosed with epilepsy experience absence seizures, episodes lasting 3-10 seconds that cause impaired consciousness and are commonly described as staring spells. This disorder not only affects children during their seizures, but between seizures as well—causing marked between seizure deficits in attention and social functioning. The mechanism for this impairment between seizures is not known. In a study at Yale University School of Medicine, researchers administered a Continuous Performance Attention Task (CPT) to 34 children ages 7-18 to examine attention between seizure episodes. The investigators found that children with absence seizures made more errors during the CPT than normal controls. Using functional MRI, the research team also was able to identify differences in the way children with absence epilepsy use brain networks involved in attention—taking a step forward in explaining the between-seizure deficits in attention in children with absence epilepsy.

Co-morbidities are common in patients with epilepsy, yet they are frequently under-diagnosed and under-treated. In children with epilepsy, quality of life, school performance, social and family interactions can all be affected. Researchers at Cleveland Clinic assessed 116 children and adolescents with chronic epilepsy; 60 pre-surgery patients, 23 post-surgical and 33 inpatient psychiatric consults. They report that the most frequent co-morbidities were mood disorders (40 percent), Attention Deficit Hyperactivity Disorder (31 percent), Anxiety Disorder (25 percent), Autism spectrum disorders (15 percent). Some of these children had been previously evaluated but remained untreated secondary to their epilepsy. The study authors conclude that integrated clinical service teams in epilepsy that include psychiatrists are essential to achieving best outcomes in this population.