

In a prospective trial of levetiracetam, up to 40 mg/kg/d, in 6 children (mean age 9.8 years) with subclinical spikes associated with attention and learning difficulties, 4 children showed statistically significant improvements in Wide Range Assessment of Memory and Learning after 10 weeks. (Mintz M et al. *J Child Neurol* 2009;24:807-815). Cognitive improvement was associated with concomitant EEG spike suppression.

Epileptiform discharges, especially centro-temporal spikes, are recorded in 25% of sleep deprived EEGs obtained in children referred with ADHD and without clinical seizures. (Millichap, John J; Stack, Cynthia, et al. personal communication). EEGs were indicated because of episodic inattention and transient lack of awareness.

ATTENTION DEFICIT AND AUTISTIC DISORDERS

ADHD OUTCOME IN COMMUNITY-BASED SETTINGS

A total of 158 community physicians from 47 separate practices in Cincinnati, Ohio, participated in an ADHD Collaborative study designed to improve physician adherence to evidence-based AAP/ADHD treatment guidelines. Medical records of 785 children aged between 7 and 11 years were reviewed initially and every 3 months for 1 year to determine treatment outcome. Following treatment with medication alone, parent- and teacher-rated ADHD symptoms showed large improvements, but functional impairment was not significantly improved. Improvement of ADHD symptoms occurred mainly in the first 3 months of medication treatment and then remained improved and stable. The degree of improvement achieved in these community settings was comparable to that reported in the Multimodal MTA Cooperative Group, medication-only study phase. Community-based physicians can achieve improvement in ADHD symptoms, similar to university-based clinical trials. Symptom improvements are not associated with functional gains in academic performance and social and family relationships. An effective treatment program must be multimodal and include, in addition to medication, collaboration with educational and psychological services. (Epstein JN, Langberg JM, Lichtenstein PK, et al. Attention-deficit/hyperactivity disorder outcomes for children treated in community-based pediatric settings. *Arch Pediatr Adolesc Med* Feb 2010;164(2):160-165). (Respond: Jeffery N Epstein PhD, Center for ADHD, Cincinnati Children's Hospital Medical Center, Mail Location 10006, Cincinnati, OH 45229. E-mail: jeff.epstein@cchmc.org).

COMMENT. Symptom improvements without significant functional gains in academic performance and social behavior may be expected in children with ADHD treated with medication alone in community-based settings. Educational, social and behavioral therapy are required to supplement medication for optimal management of ADHD.

The Multimodal Treatment Study of ADHD (MTA) was organized by the National Institute of Mental Health and collaborators to compare long-term effectiveness of various treatment strategies, 1994-1998. Patients were assigned to one of four groups: (1) medication alone, (2) combined medication/behavior modification, (3) behavior modification alone, and (4) routine community care. The medication alone group showed persisting superiority over behavior modification and community care for ADHD and

ODD, but benefits at 24 months had diminished when compared to outcome at 10 months. Combination medication and behavior therapy was not superior to medical management alone. Results of behavior therapy were not significantly different from routine community care. The benefits of intensive medical management of ADHD symptoms extend 10 months beyond the two-year treatment phase, but the effects diminish over time. (NIMH, 2004). The AAP Committee on Quality Improvement concluded that: (1) ADHD should be managed as a chronic condition, (2) stimulant medications are beneficial and different medications are equally effective, (3) behavioral therapy is minimally effective but only in combination with medication, and (4) education and counseling of patient and family are necessary adjuncts to drug therapy (Brown RT et al. *Pediatrics* 2005;115:e749-e757; Millichap JG. *ADHD Handbook. A Physician's Guide to ADHD*: New York, Springer, 2010).

EEG ABNORMALITIES AND EPILEPSY IN AUTISTIC SPECTRUM DISORDERS

EEG abnormalities and epilepsy in 57 children (86% male), mean age 82 +/- 36.2 months, with autistic spectrum disorders and their association with clinical, psychiatric, developmental, and familial risk factors were examined at Marmara and Acibadem Universities, Istanbul, Turkey. A diagnosis of autism was made in 68%, PDD in 26%, and high-functioning autism in 5%. EEG recordings were 1 hour, sleep and/or awake. Sleep only EEGs were obtained in 86% of patients; 95% with autism, 60% with PDD, and 100% for those with high functioning autism. Awake EEGs were obtained in 40% of children with PDD but only 5% of those with autism. Interictal epileptiform EEG abnormalities (IIEAs) were present in 24.6% (n=14), and epilepsy was diagnosed in 14.2% (n=8, complex partial in 4). IIEAs were associated with the diagnosis of epilepsy (P=0.0001), hyperactive behavior (Childhood Autism Rating Scale Activity scores, P=0.047), and a history of asthma and allergy (P=0.044). Epilepsy was associated with a family history of epilepsy (P=0.049) and psychiatric problems in the mother during pregnancy (P=0.0026). Eleven patients were taking AEDs, in 8 for epilepsy (4 in remission) and 3 for behavioral symptoms. Psychotropic medication was used in 44% of patients, risperidone in one half of these. (Ekinci O, Arman AR, Isik U, Bez Y, Berkem M. EEG abnormalities and epilepsy in autistic spectrum disorders: clinical and familial correlates. *Epilepsy Behav* Feb 2010;17:178-182). (Respond: Dr Ozalp Ekinci. E-mail: ozalpekinici@yahoo.com).

COMMENT. Studies cited by the authors show that the frequency of epilepsy in autism varies from 4% to 42%, and that of interictal epileptiform EEG abnormalities in ASD without seizures is between 6% and 74%. (eg. Tuchman R, Rapin I. *Lancet Neurol* 2002;1:352-8; Olsson I, Steffenberg S, Gillberg C. *Arch Neurol* 1988;45:666-8).