SEIZURE DISORDERS

SEIZURES IN CHILDHOOD ISCHEMIC STROKE

Clinical and radiographic findings in children (age range, 1 month to 18 years) with seizures after ischemic stroke between 1996 and 2006 were analyzed retrospectively at Chang Gung Children's Hospital and University College of Medicine, Taoyuan, Taiwan. Of 94 with ischemic stroke, 39 (41%) developed seizures; of these, 33 (85%) were new onset seizures. Twenty-one (75%) of 28 with no previous history of seizures had early poststroke seizures (occurring within 7 days after stroke), and 7 had late poststroke seizures (beyond 1 week after stroke). Infection was the etiology in 52% of the early poststroke seizure group but in none of the late poststroke seizure group. Infections included meningitis (6), encephalitis (1), meningoencephalitis (3), and sepsis (5). Infarction in the anterior and middle cerebral artery distribution occurred in 62% of the early and 57% of late postseizure groups. Children who had initial focal neurological signs or focal abnormalities in the EEG were most susceptible to late onset poststroke seizures (100% vs 38.1%, P=0.007; and 85.7% vs 33.3%, P=0.029, respectively, comparing those with and without focal abnormalities). Epilepsy developed in 38% of early and 100% of late onset seizure groups. (Lee J-C, Lin K-L, Wang H-S, et al. Seizures in childhood ischemic stroke in Taiwan. **Brain Dev** April 2009;31:294-299). (Respond: Dr Kuang-Lin Lin. E-mail: lincgh@adm.cgmh.org.tw).

COMMENT. Children with ischemic stroke are susceptible to seizures, and most develop within 1 week after stroke. Infection is the most common etiology. Focal signs are risk factors for development of epilepsy after childhood stroke.

LEVETIRACETAM, ATTENTION DEFICITS AND SUBCLINICAL EEG SPIKES

The effects of levetiracetam on neuropsychological functioning in six children (mean age 9.8 years) with attention and learning difficulties and subclinical EEG spikes without clinical seizures were determined in a prospective, open-label pilot study at the Clinical Research Center of New Jersey and Drexel University, Philadelphia, PA. After 10 weeks treatment up to 40 mg/kg day, levetiracetam was associated with significant improvements in the Wide Range Assessment of Memory and Learning in 4 patients, and concomitant spike suppression. Epilepsy is considered a spectrum disorder, including a subset of individuals with epileptiform EEG patterns without clinical seizures but with significant neuropsychological abnormality that may improve with levetiracetam treatment. (Mintz M, LeGoff D, Scornaienchi J, et al. The underrecognized epilepsy spectrum: the effects of levetiracetam on neuropsychological functioning in relation to subclinical spike production. **J Child Neurol** 2009;00:1-9). (Respond: Mark Mintz MD. E-mail: MMintz@thecnnh.org).

COMMENT. Further studies may be warranted to investigate this controversial subject, given the relative safety of levetiracetam.