

Migrating EEG foci in a child with epilepsy may be associated with a better outcome than fixed foci for seizure control, less abnormal imaging, and less mental retardation. (Lee I-C, Chen Y-J, Lee H-S. Migration of epileptic spike foci in encephalograms with age may correlate with a better outcome in pediatric epilepsy. **Brain Dev** 2010;32:821-828). (Respond:Dr Inn-Chi Lee, E-mail: j0000528@ms12.hinet.net).

COMMENT. Hughes JR, U Illinois, reported EEG epileptiform abnormalities at different ages. (**Epilepsia** 1967;8:93-106). Hughes JR also studied changes during a 15- to 40-year period in EEG paroxysms on 1645 EEG tracings. (Long-term clinical and EEG changes in patients with epilepsy. **Arch Neurol** 1985;42(3):213-223). Frontal and then temporal foci were most common. Patterns changed in 6 to 8 years, and EEG changes accurately predicted the type of later clinical attacks. Most manifested a temporal spike. Bilateral foci, as opposed to unilateral temporal foci, increased with age 1% per year. Right-sided foci were slower than left-sided foci to manifest bilaterality. Lateral migration was the most common intrahemispheric change; anterior migration was not statistically more common than posterior migration. Gibbs EL and colleagues also reported the migration of epileptic foci in childhood (**Am J Dis Child** 1954;88:596-603). The current study from Taiwan demonstrates that children with epilepsy and age-related migrating foci have a better prognosis than those with EEG fixed foci.

INFECTIOUS DISORDERS

NEUROLOGICAL COMPLICATIONS OF H1N1 INFLUENZA

Incidence, characteristics, and outcomes for children hospitalized between April 1, 2009 and November 30, 2009 for neurological complications of 2009 pandemic H1N1 influenza infection were compared to those hospitalized with seasonal influenza, in a study at University of Utah, Salt Lake City, and University of North Carolina, Chapel Hill, NC. Of 303 children hospitalized with pandemic H1N1 influenza, 18 (5.9%) had neurological complications, 9 in each epidemic wave, April 1 to July 30 and August 1 to November 30, 2009. A trend toward increased severity of neurological complications occurred in the second wave of cases. Most of the patients had a pre-existing underlying medical (usually neurological) condition. H1N1 influenza was detected by PCR from upper respiratory secretions. LP was performed in 10 patients and none had pleocytosis or elevated protein; PCR of CSF was negative for influenza virus in 1 patient tested. Fifteen (83%) were treated with oseltamivir. In pandemic cases, neurological complications included seizures in 12 (67%), status epilepticus in 7 (39%), encephalopathy 9 (50%), focal neurological abnormalities 5 (28%), and aphasia in 6 (33%). EEG was abnormal in 8 (44%), and MRI abnormal in 3 (7%). Focal neurological abnormalities persisted in 22% at discharge. In comparison, among 234 seasonal influenza cases hospitalized 2004-2008, 16 had neurological complications, including seizures in 10 (63%), and status epilepticus in 6 (38%). EEG was abnormal in only 1 (6%) and MRI was normal. None had encephalopathy, aphasia, or focal neurological deficits. Patients were younger (mean age 2.4 years) than those with pandemic influenza (mean ages 7.3 and 5.6 years). (Ekstrand JJ, Herbener A, Rawlings J, et al. Heightened neurologic complications in children with pandemic H1N1 influenza. **Ann Neurol** Nov

2010;68:762-766). (Respond: Dr Joshua L Bonkowski, Dept Pediatrics, University of Utah Health Sciences Center, 295 Chipeta Way, Salt Lake City, UT 84108. E-mail: Joshua.bonkowski@hsc.utah.edu).

COMMENT. Pandemic 2009 H1N1 influenza is associated with heightened neurological complications in children compared to seasonal influenza.

In a study of 345 children hospitalized with 2009 influenza A (H1N1) in California, 30 (8.7%) had CNS complications, including seizures (n=17), altered mental status/delirium (18), or both (12). Presentation with seizures ($p=.01$) or altered mental status ($p<.001$) was significantly associated with ICU admission or death. Eleven (37%) of the 30 had preexisting cerebral palsy/developmental delay or seizure disorder. Seventeen (57%) were admitted to the ICU. Median length of stay was 4 days. Of 8 fatal cases, 5 had comorbid neurological disorders, including 4 with cerebral palsy/developmental delay. (Louie JK, Gavali S, Acosta M, et al. *Arch Pediatr Adolesc Med* 2010;164(11):1023-1031).

In a study of 478 children with 2009 influenza A (H1N1) virus in Israel, 42 patients (8.8%) were admitted to the PICU, and 41 (8.6%) had seizures, mostly febrile. Patients with metabolic and neurological disorders were at highest risk for severe complications. (Stein M, Tasher D, Glikman D, et al. *Arch Pediatr Adolesc Med* 2010;164(11):1015-1022).

Influenza A-induced acute autonomic neuropathy is reported in a 15-year-old girl who developed severe and persistent orthostatic hypotension with loss of consciousness on standing. (Lukkariinen H, Peltola V. *Pediatr Neurol* Dec 2010;43:425-426). Removal of circulating autoantibodies with a single iv immunoglobulin dose (2g/kg) resulted in immediate recovery.

VARICELLA RETINITIS AND OPTIC NEURITIS

A 3-year-old immunocompetent boy with a 3-day history of typical chicken pox presented with blurred vision in the left eye, in a report from the University of Bern, Switzerland. The optic nerve was swollen and a puffy yellowish lesion covered the posterior pole and macula, consistent with retinitis and retinal edema. Active encephalitis was ruled out by lumbar puncture and negative CSF viral studies. Serology was positive for varicella (IgM), and negative for other virus infections. Treatment included a 10-day course of iv acyclovir and oral prednisone, followed by a 3 month course of oral acyclovir. The right eye was unaffected but a macular scar and optic nerve atrophy developed in the left eye, and visual acuity was 20/400 with no improvement after 9-year follow-up. (Tappeiner C, Aebi C, Garweg JG. Retinitis and optic neuritis in a child with chickenpox. Case report and review of literature. *Pediatr Inf Dis Jnl* Dec 2010;29(12):1150-1152). (Respond: Justus G Garweg MD, Swiss Eye Institute, Bremgartenstrasse 119, 3012 Bern, Switzerland. E-mail: justus.garweg@swiss-eye-institute.com).

COMMENT. The authors cite only 5 cases of chickenpox associated retinitis and 10 of optic neuritis previously reported. Prompt ophthalmological examination is