SEIZURE DISORDERS

OUTCOME OF FIRST SEIZURE FOLLOWING ACUTE ILLNESS

Researchers at Seattle Children's Research Institute and University of Washington report a prospective longitudinal study of children who presented with a first-time seizure associated with a viral infectious illness. Of 117 children in the study, 78 (67%) had febrile seizures, 34 (29%) had non-febrile seizures, and 5 (4%) had unprovoked seizures. Acute gastroenteritis was associated with nonfebrile-illness seizures more frequently than febrile seizures (47% cf 28%, respectively, P=0.05). Children with acute gastroenteritis experienced multiple seizures within the first 24 hours significantly more often than children with febrile seizures (58% and 27%, respectively, p=0.001). None of the 38 primary seizures with acute gastrointestinal illness had focal presentation, compared with 9 (12%) of 74 seizures in the nongastrointestinal illness group (p=0.02). Children with acute gastroenteritis at first seizure, regardless of fever, had fewer seizure recurrences compared with children with other acute illnesses. Children with a first nonfebrile-illness seizure were more likely than those with a first febrile seizure to have a stool sample test positive for rotavirus (p=0.02) and for norovirus (p=0.05). EEGs in 9 children with acute gastrointestinal illness were normal in 6 and showed minor irregularities in 3. (Martin ET, Kerin T, Christakis DA, et al. Redefining outcome of first seizures by acute illness. **Pediatrics** Dec 2010;126:e1477-e1484). (Respond: Danielle Zerr MD MPH, 4800 Sand Point Way NE, M/S R5441, Seattle, WA 98105. E-mail: danielle.zerr@seattlechildrens).

COMMENT. Nonfebrile illness seizures are regarded as a distinct category of provoked seizures associated with a viral infection, frequently acute gastrointestinal. The acute gastrointestinal illness nonfebrile seizure has a lower rate of seizure recurrence and few neurologic complications. The mechanism of the seizure is unclear. Fever was absent in the 24 hours before or 2 hours after the first seizure in 58% of children with gastrointestinal illness-associated seizures in the above study.

MIGRATION OF EEG SPIKE FOCI AND EPILEPSY OUTCOME

Researchers at Chung Shan Medical University, Taichung, and other centers in Taiwan analyzed 969 EEGs from 463 children with epilepsy to determine outcome differences over 3 years between those with fixed epileptic foci and those with migrated foci. Seventy-nine met inclusion criteria: 24 (30%) had fixed and 55 (70%) migrated foci. In 16 (29%) of the migrated foci cases, migration was from posterior to anterior, in 29 (53%) it was anterior to posterior, in 3 (5%) it was lateral, and in 7 (13%) unclassified. More patients with fixed than with migrated foci required multiple AEDs (P=0.004), and had abnormal image findings (P=0.014), mental retardation (P=0.035), and worse seizure control (P=0.047). Seizure frequency and number of prescribed drugs were greater in the fixed group than in the migrated foci group. Migrated foci correlate with better outcomes in both symptomatic and cryptogenic cases. A comparison of cases of BECTs and Panayiotopoulos syndrome found more fixed foci among BECTs (38% vs 0%, P=0.03).