

the frequency of seizures with roseola. The study corroborates the suggestion that seizures with roseola, HHV-6, and fever are not always simple in type. They are frequently prolonged, recurrent, and complex, and sometimes a manifestation of encephalitis or encephalopathy. (*Progress in Pediatric Neurology II*, Millichap JG, Ed, PNB Publ, 1994, pp 410, 415). These findings further weaken the hypothesis of the so-called *simple febrile seizure* as a distinct disease entity.

For abstracts from the 16th annual conference on febrile convulsions held in Tokyo, Dec 18, 1993, see Fukuyama Y. *Brain Dev* July/Aug 1994;16:339-346. Papers included neurochemical aspects, EEG studies, and clinical, epidemiological, and treatment reports. The reputed safety and effectiveness of intermittent oral diazepam (0.4 mg/kg, 3 doses) at times of fever for prevention of recurrence of febrile seizures was supported in 23 children treated at Shimane Medical University and Central Hospital, Japan.

GLUTAMATE IN PYRIDOXINE-DEPENDENT EPILEPSY

Cerebrospinal fluid levels of glutamate, g-aminobutyric acid, and pyridoxal-5-phosphate examined in a patient with pyridoxine dependency while on and off vitamin B6 treatment are reported from Universitat Munchen, and Universitats-Nervenlinik, Wurzburg, Germany. Seizures began at age 3 weeks. Despite phenobarbital, status epilepticus occurred at 3 months and was followed by infantile spasms and hypsarrhythmia. The addition of ACTH and vitamin B6 controlled the seizures and the EEG became normal. Seizures recurred on each of several occasions when vitamin B6 was withdrawn. CSF glutamate was elevated 200-fold, whereas GABA and PLP were normal. After vitamin B6 (5 mg/kg BW/day) was reintroduced, seizures stopped and the EEG was normal, but CSF glutamate was still elevated 10 fold. A dose of 10 mg/kg BW/day vitamin B6 lowered the CSF glutamate to normal levels and controlled seizures, without apparent side-effects. At age 45 months, development was normal; the head circumference having dropped from the 25th at birth to the 3rd percentile at 3 months was further reduced during ACTH treatment but rebounded and grew to a 50th percentile after vitamin B6. (Baumeister FAM, Egger J et al. Glutamate in pyridoxine-dependent epilepsy: Neurotoxic glutamate concentration in the cerebrospinal fluid and its normalization by pyridoxine. *Pediatrics* Sept 1994;94:318-321).

COMMENT. The authors emphasize that control of seizures alone may not suffice in treating pyridoxine dependency. In order to prevent mental retardation, it is important to adjust the dose of vitamin B6 to normalize CSF glutamate levels, but using the minimum effective dosage to avoid neuropathic side effects. Glutamate is an excitatory neurotransmitter and neurotoxin, and elevated brain concentrations in infants with pyridoxine dependency may explain frequent occurrence of psychomotor retardation despite remission of seizures with vitamin B6.

HYPOCALCEMIC AND HYPOMAGNESEMIC SEIZURES

The clinical findings and neurologic outcome of 15 newborn infants with seizures due to hypocalcemia (HC) and hypomagnesemia (HM) admitted to St Louis Children's Hospital are reported from Washington University, St Louis. Patients with perinatal asphyxia, cerebral hemorrhage, or other cerebral lesion were excluded. Seven infants had associated congenital heart