

Neurosurgery, Children's Memorial Hospital, Chicago, Illinois. Seizures were generalized in 64% and focal in 28%. They occurred within 24 hours after injury in 95% and within 7 days in 98%. The injury was caused by a fall in 60%. Children with a severe head injury (Glasgow Coma Scale < 8) had a 7 times higher incidence of seizures than those with minor trauma. Those with CT evidence of diffuse cerebral edema or subdural hematoma had the highest incidence of seizures. Prophylactic use of anticonvulsants was recommended in children with diffuse cerebral edema, subdural hematoma, open depressed skull fracture, or severe head injuries. (Hahn YS et al. Factors influencing post-traumatic seizures in children. Neurosurgery May 1988;22:864-867).

COMMENT. Unfortunately, the duration of prophylactic anticonvulsant therapy was not addressed in this report, although the follow-up period was 7 months to 6 years. In a previous study at the Mayo Clinic involving 2747 patients of all ages with head injury, early seizures occurred in 2.1%. The risks of post-traumatic seizures after severe injury were 7.1% within 1 year and 11.5% in 5 years, after moderate injury 0.7% and 1.6%, and after mild injury 0.1% and 0.6%. Children were at a greater risk for early seizures after severe trauma than adults, but late seizures in children were less frequent and had no relation to the occurrence of early seizures. Mild head trauma in both children and adults did not cause epilepsy. (Annegers JF et al. Neurology 1980;30:683).

ABSTINENCE-ASSOCIATED NEONATAL SEIZURES (AANS)

The neurodevelopment of 14 infants with AANS was assessed during the first year of life in the Division of Neonatology (Dr Kandall), Beth Israel Medical Center, First Ave at 16th St, New York, NY. Bayley developmental scores remained normal and most early EEG and neurological abnormalities, including hypertonia, hyperreflexia, tremors and irritability, became normal during follow-up. Seizures, mainly myoclonic, were controlled initially with phenobarbital I.V. and then oral phenobarb or paregoric. Medications were gradually discontinued if EEG's reverted to normal. Of 9 original abnormal EEG's, 4 were normal by 8 weeks of age and only one remained abnormal at 6 months. Clinical improvement paralleled EEG improvement. Prognosis for AANS was good and different from that of neonatal seizures due to other causes. (Doberczak TM et al. One-year follow-up of infants with abstinence-associated seizures. Arch Neurol June 1988;45:649-653).

COMMENT. Infants born to methadone and heroin-dependent mothers have a reported risk of 20% and 4%, respectively, of developing seizures. Fortunately, these neonatal seizures appear to be transient and unassociated with persistent neurological deficits, whereas infants with neonatal seizures from other causes have a mortality rate of 35% and two-thirds of survivors suffer from cerebral palsy, epilepsy or retardation. (Holden KR et al. Pediatrics 1982;70:165).

EPILEPSY IN AUTISM

Epilepsy occurred in 27% (14/52) of children with autism under 10 years of age in a population-based study in the Dept of Child and Adolescent Psychiatry and Pediatrics, University of Goteborg, Sweden.

Psychomotor seizure patterns in 71% of those with epilepsy were associated with temporal lobe EEG focal abnormalities. Infantile spasms and hypsarrhythmia occurred in 3 cases. Organic brain factors included perinatal asphyxia or hemorrhage, progressive encephalopathy, fragile X syndrome and tuberous sclerosis. The authors conclude that autistic behavior and epilepsy probably reflect underlying brain dysfunction and are not causally related. (Olsson I et al. Epilepsy in autism and autistic-like conditions. A population-based study. Arch Neurol June 1988;45:666-668).

COMMENT. The association of autistic behavior with epilepsy and mental retardation in children is not uncommon. Some have a previous history of infantile spasms caused by tuberous sclerosis. In this group of cases the epilepsy is primary and the autism secondary. The authors of the above study correctly distinguish between these cases referred to as autistic-like conditions and those in whom infantile autism is primary and precedes the development of epilepsy.

Adults with left-sided epileptogenic temporal lobe lesions may be at a greater risk of developing schizophrenia-like psychoses than those with right-sided lesions (Sherwin I. Acta Psychiatr Scand 1984;69 (Suppl 313):92). A review of the EEG findings in children with autism and epilepsy in the above study showed that of 10 with temporal lobe foci, 5 were left-sided, 4 right-sided and 1 bilateral. Of the 5 with left-sided foci, 3 had infantile autism and 2 were classified as autistic-like in behavior.

INFECTIOUS DISEASES

PERTUSSIS IMMUNIZATION AND CONVULSIONS

A follow-up study of 18 infants and children who suffered convulsions (9 cases) or "hypotonic-hyporesponsive" episodes (9 cases) within 48 hours following DTP immunization was conducted in the Depts of Pediatrics, UCLA Hospital and Clinics, and the Kaiser Permanente Medical Group, Los Angeles, CA. After an interval of 6 to 7 years, of 16 children contacted and considered normal by the parents, 2 had delayed language or a speech problem, 1 was a grade behind in school, 1 was hyperactive and required dexedrine, 4 (31%) of 13 tested had minor neurological abnormalities, 6 (46%) had full-scale IQ scores below 90, and 7 (54%) had below average verbal IQ scores that the authors explained by the proportion of Hispanic and bilingual children in the sample. It was concluded that none of the 16 children suffered any serious neurologic damage as a result of either convulsions or "hypotonic-hyporesponsive episodes related to prior DTP immunizations. (Baraff LJ et al. Infants and children with convulsions and hypotonic-hyporesponsive episodes following diphtheria-tetanus-pertussis immunization: Follow-up evaluation. Pediatrics June 1988;81:789-794).

COMMENT. A previous study quoted in the article failed to demonstrate IQ deficits following febrile seizures (Ellenberg JH, Nelson KB. Arch Neurol 1978;35:17). The low IQ scores recorded at follow-up in approximately 50% of the children with seizures related to DTP immunization might suggest a febrile seizure of the complex type with residual brain pathology. This possibility was discounted because the present study population included 7 (44%) Hispanic and 3 (19%) bilingual children, although all spoke English at school.