

SEIZURE DISORDERS

NEONATAL SEIZURE CHARACTERISTICS

Seizure characteristics in 32 neonates were studied prospectively using prolonged video/EEG recording at the Prince of Wales Children's Hospital, Sydney, Australia. Seizures were generally frequent with limited electrographic spread. Of 1420 seizures recorded, 85% had no clinical manifestations. Clinical observations underestimated electrographic seizures in 54% of neonates. The use of portable EEG machines with only 4 electrodes underestimated seizures in 19 neonates and failed to recognize seizures present in 2. Seizures were generally recorded in both hemispheres, but restricted spread of the seizure discharge necessitated full electrode placements for identification. Some neonates had long interictal periods, and recordings >60 min were often required for diagnosis. (Bye AME, Flanagan D. Spatial and temporal characteristics of neonatal seizures. Epilepsia October 1995;36:1009-1016). (Reprints: Dr AME Bye, Department of Paediatric Neurology, Prince of Wales Children's Hospital, High Street, Randwick, 2031, NSW, Australia).

COMMENT. This study confirms that clinical features are unreliable markers of seizures in neonates, especially in those receiving antiepileptic drugs. Prolonged video/EEG monitoring is essential for confirmation of seizure control.

MIGRATING PARTIAL SEIZURES IN INFANCY

A syndrome of undetermined cause, with onset before age 6 months, nearly continuous multifocal seizures, and progressive psychomotor deterioration is described in 14 children examined in the Universite Rene Descartes, and Hopital Saint Vincent de Paul, Paris, France. The seizures were partial and motor, moved from one cortical area to another, in 6 infants they became secondarily generalized, and the EEG discharges involved multiple independent sites. Seizures were controlled by antiepileptic drugs in only 2 patients. The EEG ictal pattern consisted of rhythmic alpha or theta activity, followed by postictal slow waves. CT was normal initially and showed atrophy with hydrocephalus ex vacuo at follow-up. MRI showed no parenchymal abnormalities. Extensive biochemical and viral studies were negative. Apart from 3 who showed improvement, patients regressed developmentally and became quadriplegic and hypotonic. Three patients died at age 7 months, 7 years, and 8 years, respectively. Autopsies in 2 cases showed severe hippocampal neuronal loss and gliosis. (Coppola G, Dulac O et al. Migrating partial seizures in infancy: a malignant disorder with developmental arrest. Epilepsia October 1995;36:1017-1024). (Reprints: Dr O Dulac, Neuropediatric Department, Universite Rene Descartes, Paris, France).

COMMENT. The authors describe a new infantile epilepsy syndrome with onset at 3 months, multifocal partial seizures, resistance to antiepileptic drugs and corticosteroids, and psychomotor deterioration. The cause is undetermined and no familial incidence has been observed.

SUPPLEMENTARY SENSORIMOTOR SEIZURES

The electroclinical and neuroimaging features, and response to antiepileptic drugs in 12 children with seizures involving the supplementary sensory motor area (SSMA) are reported from the British Columbia's Children's