COMMENT. Neuroinfectious disease is an expanding field of investigation, both in acute and in chronic disorders. The role of viral meningitis in the cause of epilepsy has received increasing attention (**Ped Neur Briefs** 2008;22:75). Maternal infection during pregnancy increases the risk of epilepsy in the offspring (**Ped Neur Briefs** 2008;22:45). Brain inflammation has a role in epileptogenesis (Choi J, Koh S. **Yonsei Med J** 2008;49:1-18).

CONTINUOUS EEG MONITORING IN CRITICALLY ILL PATIENTS WITH CNS INFECTIONS

The prevalence, predictors, and clinical significance of electrographic seizures (ESz) or periodic epileptiform discharges (PEDs) recorded during continuous electroencephalographic monitoring in critically ill patients with CNS infections were evaluated in a study at Columbia University Medical Center, New York, NY. Of 42 patients (mean age 39 years; range 0-82) identified between 1996 and 2007, 27 (64%) had viral infection, 8 (18%) bacterial, and 7 (17%) fungal or parasitic infections. Electrographic seizures were recorded in 14 (33%) patients and PEDs in 17 (40%). Either ESz or PEDs were recorded in 20 (48%) patients. Five (36%) of the 14 patients with ESz had clinical seizures. PEDs and viral infection were independently associated with ESz (P=0.001 and 0.02, respectively). ESz (P=0.02) and PEDs (P=0.01) were independently associated with poor outcome at discharge. Thirteen (31%) patients had severe disability, 3 were in coma or persistent vegetative state, and 5 died. (Carrera E, Claassen J, Oddo M, Emerson RG, Mayer SA, Hirsch LJ. Continuous electroencephalographic monitoring in critically ill patients with central nervous system infections. **Arch Neurol** Dec 2008;65:1612-1618).

COMMENT. Continuous EEG monitoring should be considered in patients with CNS infections and especially viral infection. Since electrographic seizures (ESz), recorded in 33% of the patients in this study, are associated with poor outcome, further studies are required to determine whether the ESz should be treated. The neurotropism and more extensive parenchymal damage after viral encephalitis compared to bacterial meningitis may explain the higher incidence of ESz with CNS viral infections.

NEUROMUSCULAR DISORDERS

BRACHIAL PLEXUS PALSY AND CORTICAL DYSPLASIA

Researchers at the Miami Children's Hospital report 2 infants with obstetrical brachial plexus palsy, ipsilateral leg weakness, and contralateral motor cortical dysplasia. Case 1, an 18-month-old girl presented for evaluation of a left brachial plexus palsy that followed a delivery complicated by shoulder dystocia. At 3 months, the left leg moved less and was shorter than the right. At 6 months, following a febrile seizure, a head CT revealed a smaller right hemisphere, and an EEG showed vertex spikes. Right-sided motor cortex dysplasia was diagnosed by MRI at 11 months of age and confirmed at 24 months. MRI of the brachial plexus and spinal cord were normal. At age 18 months, neurologic examination showed restricted left arm abduction and elbow flexion, decreased left biceps and

brachioradialis deep tendon reflexes, increased left patellar reflex, bilateral increase of Achilles tendon reflexes, left spontaneous Babinski, and shorter distance between the knee and ankle cutaneous creases on the left compared to the right leg.

Case 2, a 12-month-old boy with right brachial plexus palsy presented for evaluation of ipsilateral leg weakness, first noted by the mother when the infant attempted to walk. Neurological examination uncovered a tight right heel cord. Brain MRI revealed diffuse cortical dysplasia of the left hemisphere. (Alfonso I, Alfonso DT, Price AE, Grossman JAI. Cortical dysplasia and obstetrical brachial plexus palsy. **J Child Neurol** Dec 2008;23:1477-1480). (Respond: Israel Alfonso MD, Department of Neurology, Miami Children's Hospital, 3200 SW 60 Court, Suite 302, Miami, Fl 33155. E-mail: ialfonso@pediatricneuro.com).

COMMENT. The authors found no previous reports of an association of brachial plexus palsy and cortical dysplasia. They propose that this association helps explain the pathophysiology of brachial palsy in these patients by 2 mechanisms: prenatal shoulder girdle weakness and an abnormal arm position that increase the vulnerability of the plexus to stretch injury during delivery. Case 1 emphasizes the importance of attention to the length of the lower limbs and asymmetry in a neonatal neurological examination. MRI examination to exclude associated brain pathology should be considered in neonates with severe or complicated brachial plexus palsy.

Small Focal Cortical Dysplasia (FCD) lesions overlooked by routine MRI are visualized by high-resolution MRI, in a study at Montreal Neurological Institute, Canada (Besson P et al. **Brain** Dec 2008;131:3246-3255). Of 21 patients with small FCD, 17 (81%) were not identified initially, and 18 (86%) were located at the bottom of a sulcus. The knowledge that small FCD lesions are preferentially located at the bottom of an abnormally deep sulcus should aid the search for developmental cerebral lesions by routine MRI.

Outcome of Obstetric Brachial Plexus Injury correlates with force of downward traction of the fetal head in a study of 98 affected children at Goteborg University, Sweden (Mollberg M et al. **J Child Neurol** 2008;23:1424-1432). At 18 months follow-up, 82% had recovered completely and 18% had persistent functional neurological deficits.

DEMYELINATING DISEASES

RELAPSE RATE IN PEDIATRIC-ONSET MULTIPLE SCLEROSIS

Relapse rates were compared during 12 months or longer follow-up between 21 pediatric onset cases of multiple sclerosis (MS) seen at the Massachusetts General and 110 patients with adult-onset MS at the Brigham and Women's Hospitals, Boston, MA. Pediatric-onset patients had a 1.13 annualized relapse rate that was significantly higher than that in the adult-onset group (0.40) ($P<0.001$). The adjusted rate ratio was 2.81. The increased relapse rate in pediatric-onset MS remained highly significant when controlled for disease-modifying treatment time, and when age at onset was treated as a continuous variable. Pediatric-onset MS has a more inflammatory disease course than adult onset MS. (Gorman MP, Healy BC, Polgar-Turcsanyi M, Chitnis T. Increased relapse rate in pediatric-onset compared with adult-onset multiple sclerosis. **Arch Neurol** January 2009;66:54-59). (Respond: Tanuja