INFECTIOUS DISORDERS

STROKE AND AIDS

The occurrence and causes of stroke in children with acquired immunodeficiency syndrome are reported from the Albert Einstein College of Medicine, Bronx, and the State University of New York at Stony Brook, NY. The report includes seven children with HIV infection who had clinical evidence, pathological evidence or both of stroke. An estimate of the clinical incidence of stroke based on four of 68 cases followed in a longitudinal study for 4½ years was 1.3% per year. Of the seven children with stroke, four had hemorrhage in the CNS and six had non-hemorrhagic infarcts. The prevalence of cerebrovascular disease in a consecutive autopsy series was higher than the clinical incidence and was documented in six (24%) of 25 children with HIV infection, including those children who had clinical evidence of stroke. In four children with immune thrombocytopenia, hemorrhage was catastrophic in one and clinically silent in three. Arteriopathy of meningocerebral arteries and aneurysmal dilatation of the circle of Willis were found in two patients, and two had co-existing cardiomyopathy and subacute necrotizing encephalomyopathy. (Park YD et al. Stroke in pediatric acquired immunodeficiency syndrome. Ann Neurol Sept 1990; 28:303-311).

> COMMENT. In children with AIDS who develop focal neurological signs, cerebrovascular disease and stroke are likely explanations. The most frequent CNS complications of HIV-1 infection in children are developmental delays, cognitive impairment, acquired microcephaly, and bilateral corticospinal tract signs. Movement disorders and cerebellar signs are less frequent and seizures are uncommon. (Belman AL. Am J Dis Child 1988; 142:29-35; Neurologic Clinics, W.B. Saunders, Philadelphia, August 1990; 8:571-603).

NEONATAL HERPES SIMPLEX ENCEPHALITIS

The sequential EEGs of 15 neonates with herpes simplex virus meningoencephalitis were correlated with clinical and laboratory findings at the Children's Hospital, Harvard Medical School, and Massachusetts General Hospital, Boston, MA. EEGs were abnormal in seven (88%) of eight neonates examined during days one to four of the illness and three (38%) showed a multifocal periodic pattern. In three patients with an early abnormal EEG the CT and ultrasound were normal. All patients examined during days five to 11 of the illness had abnormal EEGs and three had multifocal periodic patterns. Nine patients with severe neurologic sequelae and vegetative state examined after day 11 of the illness showed markedly abnormal EEGs with very low voltage or electrocerebral silence. The authors concluded that the EEG is a sensitive test that may be superior to radiologic procedures in the early diagnosis of neonatal herpes simplex encephalitis. The multifocal periodic pattern in the presence of CSF pleocytosis is highly suggestive of the diagnosis. (Mikati MA et al. Neonatal herpes simplex meningoencephalitis: EEG investigations and clinical correlates. Neurology Sept 1990; 40:1433-1437).

COMMENT. The cranial CT and ultrasound studies may be normal when the EEG is abnormal during the first few days of neonatal herpes encephalitis. An MRI with T2 weighted images may be more revealing than the CT and will show multiple small disseminated lesions.

BOTULINUM TOXIN-A IN DYSTONIA

A report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology concludes that local injection of type A botulinum toxin (Botox) is proven as a safe and efficacious modality for the treatment of blepharospasm, cervical dystonia, and hemifacial spasm. The literature is reviewed in detail and 62 references are provided. Botox causes muscle paralysis by acting at peripheral nerve endings to block the release of acetylcholine. The effectiveness of the injections is transient lasting on the average four months. Side effects are transient, well tolerated, and amenable to treatment when indicated. (Van den Noort S et al. Assessment: The clinical usefulness of botulinum toxin-A in treating neurologic disorders. Neurology Sept 1990; 40:1332-1336).

COMMENT. Efficacy of this treatment in children parallels that in adults but safety has not been studied. Use during pregnancy or lactation is not recommended. FDA approval for the use of Botox has been obtained for the treatment of strabismus and blepharospasm associated with dystonia in patients 12 years of age and older.

Snow BJ et al report a beneficial effect of botulinum toxin on focal spasticity of leg adductors in nine patients with multiple sclerosis. (Ann Neurol Oct 1990; 28:512-515).

VARICELLA WITH DELAYED HEMIPLEGIA

Acute hemiplegia developed seven weeks to four months after varicella infection in four children reported from the Division of Child Neurology, Institute of Neurological Sciences, Tottori University School of Medicine, Yonago, Japan. Carotid angiography demonstrated segmental narrowing and occlusion of the middle cerebral artery in two patients, findings that were similar to those associated with hemiplegia after herpes zoster ophthalmicus. Cerebral angiitis was cited as the cause. A survey of infectious diseases in the San-in District of Japan showed 26,000 varicella patients and a frequency of varicella with delayed hemiplegia of 1:6500. (Ichiyama T et al. Varicella with delayed hemiplegia. Pediatr Neurol July-August 1990; 6:279-281).

COMMENT. The neurological complications of varicella may be caused by viremia with encephalitis, post exanthematous encephalitis or cerebral angiitis. Cerebellar ataxia is the most frequent neurologic complication and hemiparesis is unusual. Of the four children reported with delayed hemiparesis, two recovered completely and two had residual weakness, clumsiness, or dystonia.