

INFECTIOUS DISORDERS

CT ABNORMALITIES WITH HIV ENCEPHALOPATHY

Qualitative analysis of 100 consecutive computed tomographic (CT) studies of the brain in children with symptomatic but untreated acquired immunodeficiency syndrome is reported from the National Institutes of Health, Bethesda, MD, and the Children's National Medical Center, Washington, DC. Evidence of CNS damage from HIV, as expressed by abnormalities on CT, was seen in 86% of patients. Ventricular enlargement was the most frequent abnormality, found in 65 (78%), followed by cortical atrophy in 57 (68%). Less common abnormalities were leukoaraiosis (26%), cerebral calcification (19%), and cerebellar atrophy (12%). Children with encephalopathy (65%) were younger and had more CT abnormalities than nonencephalopathic children. (DeCarli C et al. The prevalence of computed tomographic abnormalities of the cerebrum in 100 consecutive children symptomatic with the human immune deficiency virus. Ann Neurol Aug 1993;34:198-205). (Respond: P Brouwers PhD, Bldg 10, Rm 13N240, National Inst of Health, 9000 Rockville Pike, Bethesda, MD 20892).

COMMENT. Routine use of CT in children with HIV infection may uncover evidence of presymptomatic brain disease. The authors stress the need for early assessment of possible brain involvement and modification of therapy regimens to prevent or ameliorate the onset of encephalopathy. Pathogenetic mechanisms of HIV-type 1 infection of the CNS are discussed by Epstein LG and Gendelman HE (Ann Neurol 1993;33:429). Infected macrophages initiate neurotoxicity, which is then amplified through cell-to-cell interactions with astrocytes.

Low serum vitamin B₁₂ levels, often noted in patients with HIV-1 infection, showed no significant relation to neurological abnormalities in 153 HIV-1-positive adults studied at the AIDS Neurological Center, Univ of North Carolina at Chapel Hill, NC. (Robertson KR et al. Arch Neurol 1993;50:807).

In a prospective evaluation of 181 children at risk for perinatal HIV infection, hypotonia at 6 months was related to symptomatic infection whereas hypertonia was not associated with infection at this age. In older HIV-infected children, hypertonia reflects involvement of the brain. Antiretroviral therapy altered progression of HIV encephalopathy (Chiriboga CA, Hauser WA et al. Ann Neurol Sept 1993;34:500, abstract).

CNS COMPLICATIONS OF ASEPTIC MENINGITIS IN INFANTS

The incidence and outcome of neurological complications occurring during the acute stage of aseptic meningitis in 277 infants under 2 years of age are reported from Johns Hopkins University, Baltimore, and Dartmouth

Medical School, Lebanon, NH. The dominant clinical findings were fever (88%) and irritability (78%). Meningeal irritation occurred in only 8.7%, and 8 (2.9%) infants had a single generalized seizure. Among 52 with neurologic abnormalities, 17 had a full fontanelle, 6 had complex seizures, 2 a large head circumference, and 2 diminished consciousness. Infants older than 3 months had more complications than younger infants. The type of enterovirus (Coxsackie or echo) and CSF indices were not correlated with risk of complications. Infants with CNS complications showed no sequelae on follow-up neurodevelopmental tests. (Rorabaugh ML et al. Aseptic meningitis in infants younger than 2 years of age: Acute illness and neurologic complications. Pediatrics Aug 1993;92:206-211). (Reprints: John F Modlin MD, Dept of Pediatrics, Dartmouth-Hitchcock Medical Center, Lebanon, NH 03754).

COMMENT. Acute "encephalitic" complications occurring in approximately 10% of young infants with aseptic meningitis are not associated with long-term neurologic or cognitive deficits.

Straussberg R and associates, at the Hasharon Hospital, Petach Tikvah, Israel, report two young children with posterior fossa tumors who presented with aseptic meningoencephalitis (Clin Pediatr Sept 1993; 552-4). Somnolence, stupor, and extreme nuchal rigidity were the major manifestations on admission. CSF showed pleocytosis and cultures were sterile. Surgical removal of the tumors revealed a fourth ventricle choroid plexus papilloma and a medulloblastoma. Head CT might avoid the dangers attending lumbar puncture in children with clinical manifestations that are common to both meningitis and posterior fossa tumor.

SEIZURE DISORDERS

SEIZURES AND THYROTOXICOSIS

Two thyrotoxic children, ages 10 and 11 years, who presented with seizures and coma are reported from the Departments of Pediatrics, Bolzano Hospital and the University of Pavia, Italy. Patient 1 was admitted with vomiting, headache, and stupor. He had dilated pupils, nuchal rigidity, and tachycardia. A goiter was palpable. A generalized seizure lasting 20 min was repeated despite diazepam intravenously. Serum thyroid hormone levels were markedly elevated. Patient 2 had a thyrotoxic crisis complicated by status epilepticus and coma. Both patients had abnormal EEGs, with slow activity in temporal regions and high voltage fast activity in frontal areas. (Radetti G et al. Thyrotoxicosis presenting with seizures and coma in two children. AJDC Sept 1993;147:925-7). (Reprints: Dr Radetti, Dept of Pediatrics, Regional Hospital of Bolzano, via I. Boehler no 5, 39100 Bolzano, Italy).