HN et al. J Child Neurol 1997;12:248-252). In our ADHD Neurology Clinic, we have seen one patient with WS in the past 10 years. With a structural heart defect, the use of stimulant medication is generally contraindicated. So-called "soft" neurologic signs are a common finding in WS, especially cerebellar and extrapyramidal signs. The present large series of patients with WS, including long-term follow-up observations, documents the changes in neurologic signs with age and the increase in extrapyramidal signs related to an accelerated ageing process.

INFECTIOUS DISORDERS

DIAGNOSIS AND OUTCOME OF HERPES SIMPLEX ENCEPHALITIS

Children with herpes simplex encephalitis (HSE) admitted to the Hospital for Sick Children, Toronto, Canada, between Jan 1994 and Dec 2005, were studied prospectively. Sixteen (5%) of 322 patients with acute encephalitis fulfilled criteria for HSE (encephalopathy, defined as depressed or altered level of consciousness >24 hours, plus additional specific criteria). Median age was 4 years (range, 2 months to 14 years); neonatal cases were excluded. Exposure to HSV was known in 8 (50%). All 16 presented with fever, 11 (69%) with focal seizures, 5 (31%) with hemiparesis, and 2 (13%) with dysphasia. CSF showed pleocytosis (>5 x 10^6 cells per L) in 15 (94%), 50 to 100 x 10^6 RBCs per L in 3 (19%), and elevated protein levels in 8 (50%). CSF PCR evidence of HSV was present in 12 (75%) nations, and 4 with negative CSF PCR had -/> fourfold increase in complement fixation titers in convalescent cf acute serum. In 2 patients, PCR was negative on day 1 and positive on day 3 or 7. HSV-1 was detected in 10 (83%) and HSV-2 in 2 (17%). Other identified pathogens included mycoplasma pneumoniae in 4 patients, and 1 case each with HHV-6, enterovirus, Epstein-Barr virus, influenza A, and parainfluenza 3, EEG showed generalized slowing in 13 (81%), and periodic lateralizing epileptiform discharges (PLEDS) in 2 (13%). CT or MRI abnormalities consistent with HSE (localized edema, mass effect, or hemorrhage) were present in 14 (88%). Four (25%) had infarction and hemorrhage. Of 6 cases with negative CTs, 4 had abnormal MRIs. Despite treatment with acyclovir within the first 3 days and for 14 to 21 days, 10 (63%) patients had adverse neurologic outcomes. Sequelae included seizures in 7 (44%), global developmental delay in 4 (25%), and hemiplegia in 2 (13%). No patient died. Outcome was not correlated with age, clinical features, CSF, EEG or neuroimaging abnormalities. (Elbers JM, Bitnun A, Richardson SE et al. A 12-year prospective study of childhood herpes simplex encephalitis: Is there a broader spectrum of disease? Pediatrics Feb 2007;119:e399-e407). (Respond: Ari Bitnun MD MSc FRCPC, Division of Infectious Diseases, Hospital for Sick Children, University of Toronto, 555 University Ave, Toronto, Ontario, MSG 1X8, Canada).

COMMENT. HSV accounts for 5% of all cases of acute encephalitis in children. The classic clinical presentation of HSE, with fever, altered level of consciousness, focal motor sciures, dysphasia, and hemiparesis, occurs in 75% of cases. Other presentations include ataxia, decreased visual acuity, tremor, or generalized tonic-clonic seizures. A single negative CSF PCR does not exclude a diagnosis of HSV as the cause of acute encephalitis, In patients with typical clinical presentation and consistent MRI findings, a second lumbar puncture is recommended after 3 days. The absence of CSF pleocytosis, elevated protein, and elevated RBC counts does not rule out the diagnosis. The frequent finding of additional viruses suggests a reactivation of HSV as the mechanism. Typical EEG findings helpful in diagnosis of HSE are less prevalent in children than adults. MRI is more sensitive than CT, showing localization to the limbic system in one half and bilateral disease in one third of cases. Adverse outcomes in two thirds are not predicted by clinical features or by diagnostic test abnormalities. Patients who receive a 21-day course of acyclovir, compared with a 14day course, have a lower incidence of abnormal neurologic sequelae and tendency to relapse.

Coincidental occurrence of additional viruses may point to a reactivation of HSV as the cause of encephalitis, or alternatively, the additional virus may be the primary pathogen, as suggested in a letter to the editor (Eisenhut M. Mycoplasma pneumoniae encephalitis and reactivation of herpes simplex virus. **Pediatrics** June 2007;119:1256-1257). M pneumoniae is an important cause of acute encephalitis in children, accounting for an estimated 6.9% of all cases (Bitnun A, et al. **Pediatrics** June 2007;119:1257-1258). These authors doubt the significance of serologic teats as the only evidence of M pneumoniae infection, and emphasize the difficulties in determining the etiology of acute encephalitis in some cases.

NEONATAL DISORDERS

OUTCOMES OF HEAD COOLING FOR NEONATAL ENCEPHALOPATHY

The role of possible clinical factors that might influence the efficacy of treatment with delayed head cooling and mild systemic hypothermia for neonatal encephalopathy was determined in a total of 218 term infants treated at University College, London, UK; University of Auckland, New Zealand; and other centers in the UK, USA, and Canada. Infants with moderate to severe encephalopathy plus abnormal amplitude-integrated EEG recordings were assigned randomly to head cooling for 72 hours, starting within 6 hours after birth, or conventional care without cooling. Analysis of clinical data at 18 months showed that infants with a lower encephalopathy grade, lower birth weight, greater amplitudeintegrated EEG, absence of seizures, and higher Apgar score had significantly better outcomes. Gender and gestational age were not significantly associated. In multivariate analysis, each of the clinical factors except the Apgar score was predictive of a good prognosis. Larger infants with birth weights -/> 25th percentile showed a greater frequency of favorable outcomes with cooling but less favorable outcomes for the control group. The encephalopathy grade was the single most predictive factor of outcome. Pyrexia (-/>38C) in control infants was associated with adverse outcomes; 34 control patients had rectal temperatures of ->38C during the 76-hour monitoring period, and 28 (82%) had unfavorable outcomes; of 76 without pyrexia, 45 (59%) had unfavorable outcomes (P=0.028). (Wyatt JS, Gluckman PD, Liu PY et al. for the CoolCap Study Group. Determinants of outcomes after head cooling for neonatal encephalopathy. Pediatrics May 2007;119:912-921). (Respond: Alistair Jan Gunn MBChB, PhD, Department of Physiology, Faculty of Medicine and Health Science, University of Auckland, Private Bag 92019, Auckland, New Zealand. E-mail: ai.gunn@auckland.ac.nz