infants but was of limited prognostic value in assessment of neurological outcome. These results contrast with those reported by Walsh P (J Pediat 1982;101:988), who found that serum CPK-BB activity measured in cord blood and at 6-12 hrs of life correlated with neurological outcome after severe asphyxia and compared favorably with CT scanning as a prognostic indicator. Normal CPK-BB activity was a predictor of good neurologic outcome in both studies (see Ped Neur Briefs 1987;1(3):17).

BRAINSTEM INJURY FROM PERINATAL ASPHYXIA

The clinical, radiological and neuropathological features of selective hypoxic-ischemic injury of the brainstem with relative sparing of cortex and subcortical white matter in an asphyxiated term infant are described in a case reported from the Division of Neurology and Depts of Pediatrics, Pathology and Radiology, British Columbia's Children's Hospital, Vancouver, Canada. The infant was pale, flaccid and without respiratory effort at birth and seizures occurred during the first hour. The Apgar score was one at 1, 5 and 10 min. The signs of brainstem dysfunction included abnormal horizontal eye movements, facial diplegia and ptosis, tongue fasciculations, and abnormal auditory evoked potentials. CT showed increased attenuation in the basal ganglia at 2 wks, and dilation of the third ventricle at 1 mo. Lateral ventricles and cortical sulci were normal, showing no atrophy.

The infant died of pneumonia at 4 mo of age. Neuropathological examination revealed scarring and pallor of the thalamus, basal ganglia and brainstem with neuronal loss and gliosis. (Roland EH et al. Selective brainstem injury in an asphyxiated newborn. Ann Neurol Jan 1988;23:89-92).

COMMENT. In animal studies, selective brainstem damage occurs after acute total asphyxia whereas the cerebral cortex and subcortical white matter are predominantly affected by prolonged partial asphyxia. In the human infant, the localization of hypoxic-ischemic encephalopathy is generally more diffuse (Volpe JJ Neurology of the Newborn 2nd ed, Philadelphia, Saunders, 1987) and selective brainstem injury is rare and frequently fatal.

CEREBRAL PALSY

A professor of obstetrics at the Univ of California at Davis School of Med, Sacramento, reviewing the relationship of obstetric care and management of asphyxia to the subsequent development of cerbral palsy (CP), refers to his own previously published study at Oxford University (Lancet 1984;2:827) and a similar study in progress at the Univ of Newcastle, England. Babies who were at risk for development of CP were compared with matched normal controls. The frequencies of substandard obstetric care were determined in the controls and in all cases of fetal death from asphyxia or trauma, those with severe asphyxia, convulsions in the first 48 hrs of life, and in children recognized to have CP at 18 mo of age.

Quality of care during labor proved to be less important than prenatal care. Substandard care during labor was not related to severe asphyxia, neonatal convulsions, or CP. A delay in the initiation of treatment for diagnosed asphyxia was not observed in CP cases, was uncommon in the control group (1.4%), but was frequent in cases of fetal death (20%), convulsions (7.9%) and severe birth asphyxia (5.4%). Substandard intrapartum care and especially the lack or failure to react appropriately to electronic fetal monitoring was causally related to neonatal seizures but not to CP.

A possible causal relationship of perinatal asphyxia and CP should require the following: (1) severe newborn acidosis, (2) damage to other organs, (3) severe neurologic abnormalities in the first 24-72 hrs. (Niswander KR. Does substandard care cause cerebral palsy? Contemporary Pediatrics Jan 1988; 5(1):56-76.

COMMENT. This review and study tends to confirm the results and conclusions of the Neurological Collaborative Perinatal Project (NCPP) concerning prenatal and perinatal factors associated with brain disorders that only 25% of CP cases may be attributed to asphyxia at birth and that CP is only very rarely preceded by potentially preventable perinatal asphyxia. (Freeman JM, Ed. NIH Publications 85-1149, April 1985).

BEHAVIOR AND ATTENTION DEFICIT DISORDERS (ADD)

PSYCHIATRIC DISORDERS AND ADD

The frequencies of various psychiatric and neuromaturational disorders were compared in 22 ADD children aged 5-16 yrs and in 20 normal control subjects studied by structured diagnostic interviews with mothers in the Pediatric Psychopharmacology Clinic and Child Psychiatry Service, Massachusetts General Hospital, Boston.

Compared with controls, ADD patients had significantly higher rates of conduct disorder, oppositional disorder, major affective disorder, tics, language disorder/stuttering, encopresis and learning disorders. Enuresis occurred in 7 (32%) ADD children compared to 3 (15%) controls. The rate of affective disorders in ADD children was significantly higher in subgroups with conduct/oppositional disorders and anxiety and significantly lower in the subgroup with neuromaturational disorders (enuresis, encopresis, language disorders, tics) when compared to normal control subjects. The incidence of conduct disorders was increased in the ADD subgroup with anxiety disorders. The recongition of ADD subgroups and psychiatric co-morbidity may be clinically useful in prognosis and treatment. (Munir K, Biederman J, Knee D. Psychiatric comorbidity in patients with attention deficit disorder. J Amer Acad Child Adol Psychiat 1987; 26(6):844-848).

COMMENT. Previous studies have emphasized the need to correctly classify children with ADD into groups with or without conduct and anxiety disorders and those with abnormal neurologic signs and MBD when evaluating drug effects. (see Ped Neur Briefs 1987;1(2):14).

LANGUAGE DISORDERS AND ADD

The prevalence rates of speech and language disorders and ADD in 116 children referred for psychiatric services were determined at the Ontario Association of Children's Mental Health Centres and the Dept of Psychiatry, Hospital for Sick Children, Toronto, Canada. Speech and language disorders were diagnosed in 65% and ADD in 73%. Only 16% had speech and language disorders alone and only 25% had ADD alone. The overall prevalence for the dual diagnosis was 48%. Three-quarters of those with language disorders also had ADD and two-thirds with ADD also had language disorders. The average age at evaluation was 5 yrs. Boys outnumbered girls for language disorders with or without ADD. The presence of language disorder was correlated with intact family status in lower socioeconomic classes, single-child families, and serious parent/child problems. (Love AJ, Thompson MGG. Language disorders and attention deficit