

a working memory cognitive task was enhanced in the ADHD group but not in children with comorbid anxiety. Both groups showed a lessening of motor activity. (Tannock R et al. Differential effects of methylphenidate on working memory in ADHD children with and without comorbid anxiety. J Am Acad Child Adolesc Psychiatry July 1995;34:886-896).

The importance of rewards such as money and the role of motivation in explaining the effects of stimulant medication in children with ADHD were suggested by a study of 16 ADHD boys receiving MPH or placebo at the Department of Educational Psychology, University of Utah, Salt Lake City. ADHD subjects earned significantly more money on a button pressing test during drug treatment compared to placebo. Drug-related improvements in cognitive tasks may be a consequence of increased effort. (Wilkinson PC, Kircher JC et al. Effects of methylphenidate on reward strength in boys with attention-deficit hyperactivity disorder. J Am Acad Child Adolesc Psychiatry July 1995;34:897-901).

Our British colleagues now recognize the diagnosis of ADHD and have begun to treat with methylphenidate in a limited way. (Taylor E, Hemsley R. Treating hyperkinetic disorders in childhood. Treatment needs care but is worthwhile. BMJ 24 June 1995;310:1617-1618). At a meeting in England in the 1970s, Dr Ronald C Mac Keith of the Spastics Society once scolded me for my interest and research in the hyperkinetic child with MBD. It was his opinion that the entity was over emphasized in America and did not exist in the UK. (Millichap JG, Ed. Learning Disabilities and Related Disorders: Facts and Current Issues. Chicago, Year Book Medical Publishers, 1977).

DEFINITION AND CLASSIFICATION OF ADHD

Issues relating to the definition and classification of ADHD are outlined from the Departments of Pediatrics, Neurology, and Child Study, Yale University School of Medicine, New Haven, CT. In *DSM-III-R* (1987) attention deficit disorder with hyperactivity was referred to as ADHD, and ADD without hyperactivity was called undifferentiated ADD. In *DSM-IV* (1994) the categories of ADHD are 1) inattention only, 2) hyperactive only, or 3) combined inattention-hyperactive type. "Attention," the psychological construct as measured in the laboratory, should not be confused with "behavior attention deficit," the disorder evaluated by rating scales. Despite the *DSM* definitions of types, children with ADHD represent a heterogeneous population that varies with 1) the degree of cognitive and behavioral overlap, 2) the relative predominance of inattention or hyperactive-impulsive behavior, and 3) the specialty interest of the professional who diagnoses and treats the patient - pediatrician, child neurologist, psychiatrist, psychologist, educator, or speech-language pathologist. Samplings from mental health settings have different characteristics compared to those from pediatric neurology clinics. Patients with comorbid behavioral disorders such as oppositional and conduct disorders would be referred to psychiatrists and clinical psychologists, while those with ADHD complicated by learning disabilities are more likely to be seen by the pediatric neurologist and educational psychologist. A systematic classification of subtypes of ADHD should lead to more precise definitions of etiology, treatment, and prognosis. (Shaywitz BA, Fletcher JM, Shaywitz SE. Defining and classifying learning disabilities and attention-deficit/hyperactivity disorder. J Child Neurol 1995;10

(suppl 1):S50-S57). (Respond: Dr Bennett A Shaywitz, Department of Pediatrics, Yale University School of Medicine, PO Box 208064, New Haven, CT 06520).

COMMENT. The neurologic and psychiatric examinations, psychological evaluations, and EEG and evoked potentials are important in the differentiation and treatment of subgroups of ADHD children and adolescents. (see Millichap JG, Ed, Progress in Pediatric Neurology I, Chicago, PNB Publ, 1991; and Ped Neur Briefs March 1995;9:20). Abnormalities of CNS maturation and function revealed by longitudinal auditory evoked responses and EEGs were found to characterize non-delinquent ADHD subjects, while delinquent hyperactive subjects showed normal CNS maturation. ADHD boys with neurologic abnormalities had a better outcome than those with normal CNS function who later exhibited delinquent behavior secondary to environmental social factors, (Satterfield JH et al. Electroenceph Clin Neurophysiol 1987;67:531; see PPN I, pp159-160).

HEAD TRAUMA

ENLARGING SKULL FRACTURES

The diagnosis, management, and treatment of large unhealed skull fractures are reported in 10 children, aged 2 weeks to 27 months, seen at the Children's National Medical Center, Washington, DC in a 4 year period. The parietal bone was involved, and an underlying cortical contusion was associated with a contralateral hemiparesis. Five (50%) had post-traumatic seizures, and 4 (40%) had mild hydrocephalus and porencephaly. The fractures enlarged in 8 preoperatively. At surgical repair, 1-11 months after injury, the lacerated dura was retracted beneath the fracture edge and grafted, and a cranioplasty or transposition of adjacent bone with normal dura was performed. A shunt was placed in those with hydrocephalus. None had formed a leptomeningeal cyst at the site of the fracture. Enlargement of the fracture was not caused by erosion but by expansion of the skull to accommodate growing brain or increased pressure. The diagnosis was made clinically, without need for serial skull X-rays. (Johnson DL, Helman T. Enlarging skull fractures in children. Child's Nerv Syst May 1995;11:265-268). (Respond: Dr DL Johnson, Division of Neurosurgery, Milton S Hershey Medical Center, PO Box 850, Hershey, PA 17033).

COMMENT. Laceration and retraction of the dura, the tissue needed for osteoplastic repair, are the reasons for the failure of the fracture to heal. The fracture widens as the skull expands with growth or the result of pressure of the uncontained brain, apparently not because of cyst formation, the most widely accepted theory.

Mortality from head injury. In Geneva, Switzerland, the mortality from head injuries in children has decreased progressively during the last quarter century from 10.4/100,000 to 3.5/100,000 annually, according to a study at the University Hospital (Berney J et al. Head injuries in children: a chronicle of a quarter of a century. Child's Nerv Syst May 1995;11:256-264). Better organization and management and a drop in severe cases due to less traffic accidents accounted for the improved statistics. The number of children handicapped by head injury was unchanged, however, indicating a need for prevention.