the seizures per se may impair behavior, or children may have abnormal psychological responses to seizures. (Austin JK, Dunn DW, Caffrey HM et al. Recurrent seizures and behavior problems in children with first recognized seizures: a prospective study. Epilepsia Dec 2002;43:1564-1573). (Reprints: Dr JK Austin, Indiana University School of Nursing, 1111 Middle Drive, NU492, Indianapolis, IN 46202).

COMMENT. Children with recurrent seizures are at increased risk for behavior problems, even after correcting for possible effects of antiepileptic drug therapy.

Behavioral and emotional disorders are sometimes regarded as a form of epilepsy (see Progress in Pediatric Neurology III, PNB Publishers, 1997;pp70-71), but the concept of a behavioral epilepsy is controversial. In a multicenter Japanese study, a comparison of emotional and behavioral problems of 53 children having epileptiform EEGs and those of children without EEG abnormalities showed no significant differences. The authors concluded that the behavioral problems were coincidental (Okubo Y et al. Epilepsia 1994;35:832-841).

DEVELOPMENTAL DISORDERS

EVALUATION OF GLOBAL DEVELOPMENTAL DELAY

The Quality Standards Subcommittee of the AAN and the Practice Committee of the CNS have issued recommendations for the evaluation of the child with nonprogressive global developmental delay (GDD), based on a review of relevant literature and scheme of evidence classification. GDD affects 1% to 3% of children. Routine metabolic screening (blood gas, serum lactate and ammonia, serum amino acids and urine organic acids, T4 and TSH) gave yields of 1% and is not indicated as an initial test, except when universal newborn screening (UNS) was omitted or uncertain. Routine cytogenetic studies and molecular testing for fragile X mutation gave yields of 3.5% to 10% and are indicated, even when dysmorphic and specific syndrome features are absent. Additional genetic studies (including subtelomeric chromosomal rearrangements) may be indicated in children with a family history of GDD. Rett syndrome is considered in girls with unexplained moderate to severe delays. Serum lead levels are mandatory in children with identifiable risk factors of lead exposure or signs of intoxication. Thyroid studies are ordered only if clinically indicated or in the absence of newborn screening; the yield is near 0 in patients included in UNS; 4% if no UNS. EEG is recommended when symptoms suggest epilepsy or a specific epilepsy syndrome. Routine neuroimaging, preferably MRI, is recommended, particularly if the neurological examination is abnormal or the history suggests acquired CNS injury or risk of cerebral malformation. Routine visual and audiometric testing is recommended in all cases, and screening for autism or a language disorder should be considered. A specific etiology can be determined in the majority of children with GDD. In the absence of specific clinical features, a stepwise approach is recommended: MRI, cytogenetic screen/fragile X, metabolic tests, and genetic consultation. (Shevell M, Ashwal S, Donley D et al. Practice parameter: evaluation of the child with global developmental delay. Neurology February (1 of 2) 2003;60:367-380). (Reprints: Dr Stephen Ashwal, Department of Pediatrics, Loma Linda University School of Medicine, 11175 Coleman Pavilion, Loma Linda, CA 92350).
COMMENT. After a detailed history and examination, a consensus-based staged approach to the evaluation of the child with global developmental delay is suggested. The timing of this evaluation is often a problem, a subject that needs further study. State-based newborn screening programs will identify some metabolic disorders shortly after birth. All states screen for phenylketonuria and congenital hypothyroidism, and most screen for sickle cell disease and galactosemia. (Pediatrics 2000;106:383-427). Thirty two states require universal newborn hearing screening. All children with GDD should have auditory and visual testing. Based on diagnostic yield, the MRI (nonenhanced) had the highest yield (55%), and metabolic screening the lowest (1%). The Committee emphasizes that the report is meant as an educational service, and is not meant to exclude alternative individualized evaluations of GDD.

EARLY DIAGNOSIS OF FRAGILE X SYNDROME

Surveys from 274 families with at least one child with fragile X syndrome (FXS) were used to determine factors associated with the discovery of the diagnosis in a study at the University of North Carolina, Chapel Hill, NC. The average age at first concern was 15.6 months, professional confirmation was at 25.9 months, entry into early intervention or special services was at 32 months, the FXS test was ordered at 56.2 months, and the diagnosis was made at 60 months. Variability of the timing of these steps in diagnosis was considerable; the average age of diagnosis ranged from 6 months to 30 years. Children born later than 1990 were identified much earlier; for boys, the average age at diagnosis was 31.5 months. Girls were identified with FXS about 6 months later than boys. Many families had additional children with FXS before becoming aware of increased risk. Parents of children with FXS perceive the discovery of the diagnosis to take too long, leading to delays in interventional services, including counseling. Future solutions to the delay in diagnosis may include universal newborn screening. (Bailey DB Jr, Skinner D, Sparkman KL. Pediatrics February 2003;111:407-416). (Reprints: Donald B Bailey Jr, PhD, Frank Porter Graham Child Development Institute, CB #8180, University of North Carolina, Chapel Hill, NC 27599).

COMMENT. The authors predict that the diagnosis of FXS is a challenge to current criteria for newborn screening candidates. Despite the growing emphasis on early diagnosis of mental retardation syndromes, most children with disabilities are not identified at birth. Greater attention to parental concerns, and regular developmental screening might enhance the earlier diagnosis of children with disabilities.

ANATOMICAL CORRELATES OF DYSLEXIA

The relation between measurements of the posterior temporal lobe, inferior frontal gyrus, cerebellum and whole brain, determined by MRI, and measures of reading, spelling, verbal intelligence and language skills was studied at the University of Florida, Gainesville, FL. Dyslexic children (14 males, 4 females) and controls (19 males, 13 females) in grades 4-6 were selected from a family genetics study. Dyslexics had specific deficits in word reading relative to the population mean and verbal IQ. Dyslexics had