COGNITIVE OUTCOME WITH EPILEPSY AND MALFORMATIONS

To determine the relationship between malformations of cortical development and intellectual functioning (IQ), 54 children and adolescents with intractable epilepsy who later underwent cortical resection were studied at the Miami Children's Hospital, FL. Cortical lesions were classified as circumscribed or diffuse. Circumscribed lesions had less adverse effect on nonverbal IQ than diffuse cortical dysplasias. The same was true for verbal measures, but only with right-sided lesions. Left-sided lesions were associated with poor performance on verbal IQ tests, when compared to right-sided lesions. Younger age at onset and diffuse lesions were risk factors for greater impairment of cognitive functioning. (Klein B, Levin BE, Duchowny MS, Llabre MM. Cognitive outcome of children with epilepsy and malformations of cortical development. Neurology July (2 of 2) 2000;55:230-235). (Reprints: Bonnie Levin PhD, Department of Neurology, 1150 NW 14th St, Ste 715, Miami, FL 33136).

COMMENT. In children with intractable epilepsy, cortical diffuse dysplasias acquired in utero and early left hemisphere lesions affect cognitive functioning more adversely than circumscribed lesions or right hemisphere developmental lesions..

VALPROATE, MENSTRUAL DISORDER AND POLYCYSTIC OVARIES

Three patients treated with valproate for epilepsy, beginning at 16, 17, and 31 years of age, developed a reproductive disorder and are reported from the University of Oulu, Finland. Hyperandrogenism (elevated serum testosterone levels) and polycystic ovaries were diagnosed in all cases, and weight gain and menstrual disorder occurred in two. Lamotrigine substituted for valproate resulted in a decrease in testosterone levels in all 3, disappearance of polycystic ovaries in 2, and loss of weight and normal menstruation in 2. (Isojarvi JIT, Tapanainen JS. Valproate, hyperandrogenism, and polycystic ovaries. Arch Neurol July 2000;57:1064-1068). (Reprints: Jouko I T Isojarvi MD PhD, Department of Neurology, University of Oulu, FIN-90220 Oulu, Finland).

COMMENT. The authors advise that ovarian structure and function should be checked in women of reproductive age taking valproate for epilepsy, especially if menstrual irregularities develop during treatment. Reproductive endocrine disorders may occur with increased prevalence in women with epilepsy. See Progress in Pediatric Neurology III, 1997;p138, for a previous report by the same authors of 14 cases of valproate-induced polycystic ovarian syndrome. The incidence of this complication with valproate therapy was 64%, the mean duration of treatment was 7 years, and the mean daily dose of valproate was 1070mg.

ATTENTION DEFICIT DISORDERS

GENETICS OF ADHD

Advances in the genetics of childhood neuropsychiatric disorders over the past decade were reviewed in the literature and reported from Yale University School of Medicine, New Haven, CT. In ADHD a genetic basis is suggested by family and twin studies. A focus on dopamine neurotransmission showed that children with ADHD had a higher incidence of the high-risk variant of DRD4 than controls, but the relationship is still controversial. The dopamine transporter gene (DAT1)

has been linked to ADHD. Mice lacking expression of this gene were more active than control littermates. Functional variants of genes involved in dopamine transmission may confer a familial risk for ADHD. (State MW, Lombroso PJ, Pauls DL, Leckman JF. The genetics of childhood psychiatric disorders: a decade of progress. J Am Acad Child Adolesc Psychiatry August 2000;39:946-958). (Respond: Dr Leckman, Child Study Center I-269 SHM, Yale University School of Medicine, 230 South Frontage Road, PO Box 207900, New Haven, CT 06520).

COMMENT. Abstracts of posters presented at the VIIIth World Congress on Psychiatric Genetics, Versailles, France, August 2000, are published in the Aug 7 issue of the American Journal of Medical Genetics 96:452-571. Further evidence of linkage and association between ADHD and DRD4 polymorphism is presented but results were marginal.

Parental ADHD. Weiss M, Hechtman L, and Weiss G provide a clinical perspective on ADHD in parents (J Am Acad Child Adolesc Psychiatry Aug 2000;39:1059-1061). ADHD is highly familial. More than 50% of parents with ADHD have a child with ADHD, and 25% of children with ADHD have an ADHD parent. Siblings are frequently affected, and families with multiple ADHD members are especially challenged. Parents with ADHD are recognized for their failure to keep appointments for the child patient, they are restless in the office, they forget to bring along school reports, and they monopolize the interview. Parental ADHD can impact family functioning and the treatment of the child. Family counseling must address both the child's and parent's problems.

Executive functions and ADHD are reviewed by Barkley RA in Part 1 of a series of columns on the Genetics of ADHD (J Am Acad Child Adolesc Psychiatry Aug 2000;39:1064-1068). The term executive function, deficient in ADHD, includes purposive, goal-directed activity; inhibition of distraction; response inhibition or delayed gratification; selective problem-solving; flexibility; goal persistence; and self-awareness. Self-regulation is essential for normal executive function. The prefrontal cortex is the anatomic localization of these functions. Attention deficits typical of ADHD are termed *intention deficits.*

COMMUNITY PERSPECTIVE ON STIMULANT THERAPY FOR ADHD

The use of stimulant medications in relation to diagnoses of attention-deficit hyperactivity disorder (ADHD) was reviewed in interviews with 9- to 16-year-olds from the Great Smoky Mountains Study and reported from Duke University Medical Center, Durham, NC. Among children meeting DSM-III-R criteria by parental reports, 72% received stimulant medication. In those meeting full criteria for diagnosis, boys and younger children were more likely to receive treatment than girls and older children. In this rural community, 7.3% of children had received stimulants, more than twice the number diagnosed with ADHD. The mean duration of treatment was 50 months. Comorbidity with ODD increased the rate of stimulant therapy. Among children not recognized by parents as ADHD, 29% received stimulant therapy. Stimulants were also prescribed for children without teacher confirmation of ADHD. Among adverse events, tics occurred in 3.9% of children receiving stimulants, compared with 0.4% of children who were never treated. (Angold A, Erkanli A, Egger HL, Costello EJ. Stimulant treatment for children: a community perspective. J Am Acad Child Adolesc Psychiatry August 2000;39:975-984). (Reprints: Dr Angold, Developmental Epidemiology Program, DUMC Box 3454, Durham, NC 27710).