

Prognosis of West syndrome

A most current article on West syndrome out of Istanbul University, Turkey, concerns 'The informative value of magnetic resonance imaging and EEG in the prognosis of infantile spasms.' (Saltik S, Kocer, N, Dervent A. Epilepsia March 2002;43:246-252). A total of 86 cases, 8 cryptogenic and 78 symptomatic, were followed clinically and by video-EEG and MRI for >1 year. A significant correlation was determined between clinical and EEG findings, especially with regard to psychosocial development, and less so for motor development. MRI findings were correlated only with motor development. EEG and MRI are complementary in regard to prognostic informative value.

TOPIRAMATE-INDUCED VALPROATE TOXICITY

Three children with severe refractory epilepsy who developed typical valproate (VPA) adverse effects after introducing topiramate (TPM) in combination are reported from the University of Mannheim, Germany. Patient 1 was admitted at 16 months with psychomotor retardation and myoclonic seizures, subsequently diagnosed as Lennox-Gastaut syndrome. Initial treatment with carbamazepine (CBZ) and VPA was ineffective and the combination was changed to VPA and TPM. Apathy, loss of appetite, and fever developed after 4 weeks, and liver enzymes and ammonia levels were elevated. Recovery followed within 6 days after withdrawing VPA and TPM. All three patients developed severe typical VPA side effects with liver dysfunction during treatment with VPA and TPM, having tolerated VPA well in different AED combinations previously. VPA serum levels were within the normal range. One child had severe thrombocytopenia, and two had hypothermia, in addition to liver toxicity. All side effects were completely reversible after withdrawing VPA. (Longin E, Teich M, Koelfen W, König S. Topiramate enhances the risk of valproate-associated side effects in children. Epilepsia March 2002;43:451-454). (Reprints: Dr E Longin, University Children's Hospital, Theodor-Kutzer-Ufer, 68167 Mannheim, Germany).

COMMENT. The authors cite a report of 2 adult patients with severe typical VPA side effects that developed after treatment with VPA and TPM (Hamer et al. 2000). Symptoms of encephalopathy and hyperammonemia resolved after treatment was withdrawn. TPM appears to increase the risk of VPA toxicity when the drugs are used in combination. Careful monitoring of liver function and CBC is important when using VPA with TPM.

TESTS OF ATTENTION IN NEWLY DIAGNOSED IDIOPATHIC EPILEPSY

Performance on tests of Reaction Time, Color Trails, Manual Tapping and Steadiness, and Sustained Attention were compared in 51 children with epilepsy (age 7-16 years) and 48 healthy classmates, in a study at Wilhelmina Children's Hospital, Utrecht, the Netherlands. Execution times and motor speed were not significantly different in children with epilepsy and controls. Significantly more patients than controls had transient poor performance in one or other task (69% cf 40%). Patients with prior school or behavior difficulties and those whose parents could not adjust to a diagnosis of epilepsy performed worse than those without these additional problems. Epilepsy-related variables did not explain any variance in performance of attention and other tasks. (Oostrom KJ, Schouten A, Kruitwagen CLJJ et al. Attention deficits are not characteristic of schoolchildren with newly diagnosed idiopathic or cryptogenic epilepsy. Epilepsia March 2002;43:301-310). (Reprints: Dr KJ Oostrom, Department of Child Neurology, Division of

Neuropsychology, University Medical Center, Wilhelmina Children's Hospital, PO Box 85090, 3508 AB Utrecht, The Netherlands).

COMMENT. Children with newly diagnosed idiopathic epilepsy without other complications are not subject to persistent deficits in attentiveness. Treatment with antiepileptic medications had no adverse effects on attention in this study. Prior school and behavioral difficulties and maladjustment to the diagnosis of epilepsy, but not epilepsy variables, may be associated with impaired attention

ATTENTION DEFICIT AND LEARNING DISORDERS

PRENATAL NICOTINE/ALCOHOL EXPOSURE AND ADHD

A retrospective, hospital-based, case-control study of attention deficit hyperactivity disorder (ADHD) and prenatal exposure to maternal cigarette smoking, drug use, and alcohol was conducted in 280 ADHD cases and 242 non-ADHD controls at the Massachusetts General Hospital, Boston, MA. Questions in direct interviews included; 'Did you smoke a pack a day for at least 3 months?' 'Did you drink an alcoholic beverage daily?' Patients with ADHD were 2.1 times more likely ($p=.02$) to have been exposed to cigarettes and 2.5 times more likely ($p=.03$) to have been exposed to alcohol in utero compared to non-ADHD controls. The effects of cigarette, alcohol, and drug exposure were not significantly different in male and female patients. None had fetal alcohol syndrome. Potential confounding factors, including familial ADHD, maternal depression, comorbid conduct disorder, and Rutter's indicators of social adversity, did not explain the effect of prenatal exposure to alcohol or cigarette nicotine. Research aimed at identifying and preventing the risks of alcohol and nicotine abuse during pregnancy needs to be developed. (Mick E, Biederman J, Faraone SV, Sayer J, Kleinman S. Case-control study of attention-deficit hyperactivity disorder and maternal smoking, alcohol use, and drug use during pregnancy. J Am Acad Child Adolesc Psychiatry April 2002;41:378-385). (Respond: Dr Mick, Massachusetts General Hospital-Pediatric Psychopharmacology Research, 15 Parkman Street, WACC 725, Boston, MA).

COMMENT. A two-fold or greater increased risk of ADHD is associated with significant prenatal exposure to nicotine and alcohol, confirming previous studies and showing that the risk cannot be explained by familial, maternal and social confounding factors. ADHD is an additional deleterious effect to the known fetal alcohol syndrome associated with maternal alcohol abuse or exposure. Clinicians should continue to enquire regarding the habit of smoking in parents of children with ADHD, and expectant mothers should be warned regarding the added dangers of smoking as well as drinking in pregnancy.

Quality of life assessment in children with ADHD and families was studied at the Department of Pediatrics, Harvard Medical School. (Landgraf JM, Rich M, Rappaport L. Arch Pediatr Adolesc Med April 2002;156:384-391). A parent-completed questionnaire is developed and implemented to measure the effect of ADHD and its treatment on the quality of life of patients and families. Significant differences were determined in quality of life of children with ADHD inattentive and ADHD combined types. The questionnaire may be used to measure the outcome of care for ADHD.