

disabilities occurred in 25% and mild handicaps in 38% of surviving infants.

### **TERATOGENICITY OF ANTICONVULSANTS (AEDs)**

The risks of teratogenic effects of AEDs are reported from Erasmus University, Rotterdam, The Netherlands. These consist of major malformations, minor anomalies, intrauterine or postnatal growth failure, and psychomotor retardation. The absolute risk of 7-10% is about 3-5% higher than that in the general population. None of the currently available AEDs is free of possible adverse effects on the fetus. Valproate and carbamazepine are associated predominately with spina bifida and hypospadias. Barbiturates and phenytoin are associated with congenital heart malformations and facial clefts. Risk factors include a high daily AED dosage, high maternal serum AED levels, low folate levels, or polytherapy. Genetic predisposition plays a role but no tests are available for identifying parents or fetuses at high risk. Prenatal diagnosis consists of fetal ultrasound during week 18-20, *a*-fetoprotein analysis of amniotic fluid in week 16 in mothers receiving VPA or CBZ (Lindhout D, Omtzigt JGC. Pregnancy and the risk of teratogenicity. Epilepsia 1992; 33 (Suppl 4):S41-S48). (Reprints: Dr. Dick Lindhout, Department of Clinical Genetics, Erasmus University, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands.)

**COMMENT.** Prevention of teratogenic AED side effects should include the evaluation of the patient before conception, the need for AED therapy, monotherapy with the lowest possible dosage, avoidance of high peak levels by dividing daily dosage into 2 or 3 doses, folic acid supplement in cases of obvious deficiency and exclusion of vitamin B<sub>12</sub> deficiency. Minor anomalies tend to lessen or disappear with age (e.g. nail hypoplasia). Pregnancy and teratogenesis in epilepsy was the subject of a Neurology supplement 5, April 1992. The effects of prenatal exposure to anticonvulsants on intellectual functioning of 4-8 year olds are reported by Vanoverloop D et al. from the Department of Pediatrics, Harvard Medical School, Boston (Neurotox Teratol Sept/Oct 1992; 14:329-335). None of the children was mentally retarded, but scores for performance IQ and full scale IQ were lowered.

## **INFECTIOUS DISORDERS**

### **BRAIN ABSCESS: MANAGEMENT**

A review of 130 children with brain abscesses treated over 21 years is reported from Hacettepe University School of Medicine, Sıhhiye, Ankara, Turkey. Four (3%) were infants, 45% were aged 3-8 years, and 30% were 6-8 years. The incidence decreased between ages 8 and 18 years. Chronic ear infection with mastoiditis occurred in 28 (21%) and congenital heart disease in 26 (20%). Infants had meningitis or ventriculitis. The abscess was supratentorial in 113. In children with congenital heart disease, the parietal lobes were commonly involved with a left-sided predilection (77%). Multiple

abscesses occurred in 17 (13%). Primary or secondary excision was used in 74. The initial surgical procedure was aspiration in 71. Staphylococcus, Streptococcus and Proteus were the predominant microorganisms. Cephalosporins were used only recently and penicillin and chloramphenicol were the antibiotics used in earlier cases. Mortality was 15% overall, but 6% in the last 5 years and 0 in the last 3 years. Mortality in infants was 50% (Tekkok IH, Erben A. Management of brain abscess in children: review of 130 cases over a period of 21 years. Child's Nerv Sys Oct 1992; 8:411-416). (Correspondence: I.H. Tekkok, M.D., Department of Neurosurgery, Hacettepe University School of Medicine, Sıhhiye, Ankara 06100, Turkey.)

**COMMENT.** The medical cure of a brain stem abscess and serial brainstem auditory evoked potentials are reported from the Department of Pediatrics, Chang Gung Memorial Hospital, 199 Tung-Hua N. Road, Taipei, Taiwan, Republic of China (Wang HS et al. Dev Med Child Neurol Oct 1992; 34:911-915). A 9 year-old girl with tetralogy of Fallot was cured after 6 weeks of parenteral antibiotic therapy, without surgical intervention. The initial brainstem auditory evoked potential showed poor demonstration of right waves IV and V, and delay of right wave III and left wave V. Serial follow-up showed improving latencies and wave forms but persistent abnormalities on the right side. The patient presented with a right-sided ptosis, abducens palsy and peripheral facial palsy and left hemiparesis. CT showed a hypodense lesion in the brain stem. Vancomycin and chloramphenicol were the antibiotics used in treatment.

#### **CT IN ACUTE MENINGITIS**

The role of CT in the acute management of bacterial meningitis in 30 children was evaluated at the Department of Pediatrics, St. Mary's Hospital Medical School, London, England. Cranial CT was normal in 10 patients, 5 with raised intracranial pressure, 1 with focal neurological signs and 1 with generalized convulsions. Significant CT abnormalities were detected in 10 patients, 4 with subdural effusion, 4 with cerebral infarct, 1 hydrocephalus, and 1 empyema. CT identified a surgical abnormality in 2 patients with progressive focal neurological signs (Heyderman RS, Robb SA, Kendall BE, Levin M. Does computed tomography have a role in the evaluation of complicated acute bacterial meningitis in childhood? Dev Med and Child Neurol Oct 1992; 34:870-875). (Correspondence: Dr. R.S. Heyderman, Department of Pediatrics, Queen Elizabeth the Queen Mother Wing, St. Mary's Hospital Medical School, South Wharf Road, London W2 1NY.)

**COMMENT.** This study shows that the role of CT in the management of acute bacterial meningitis is limited, but may be valuable in those with progressive neurological signs for whom neurosurgical intervention may be necessary.

The long-term follow-up of acute bacterial meningitis in 74 children is reported from Taiyuan City, China (Yi LY, Qiong YS.