

rates. Neurobehavioral development was similar in the supplemented and nonsupplemented groups and there were no differences in weight, length and head circumference in the two groups. (Tyson JE et al. Randomized trial of taurine supplementation for infants less than 1300 gram birth weight: Effect on auditory brainstem evoked responses. Pediatrics Mar 1989; 83:406-415).

COMMENT. There had been reports in the literature that taurine deficiency retarded growth of primates and caused abnormalities in the electroretinograms in infants. The present study failed to show an effect of taurine deficiency or supplementation on weight gain, but maturation of auditory brainstem evoked responses (BAER) was delayed in preterm infants who were fed taurine deficient diets. Nutritional needs of infants may be evaluated by methods other than clinical signs and growth measures. New approaches such as the BAER to studies of amino acid requirements may provide correlation between maturation of electrophysiological responses, diet and metabolism of the brain.

ELECTROENCEPHALOGRAPHY

EEG IN PRE-SHUNT HYDROCEPHALUS

The EEG findings in 105 hydrocephalic children with proven ventriculomegaly and increased intracranial pressure are reported prior to initial shunt treatment in the Department of Pediatrics, University of Oulu, Finland. Abnormal EEGs were seen in 98%. Paroxysmal slow wave activity, generalized or posterior, was present in 37 (35%) recordings and focal slow waves in 28 (27%) patients. Spike or sharp wave activity was recorded focally or generally in 45 (43%). The prevalence of spikes and sharp waves became less with increasing age and only generalized spikes occurred after seven years of age. The etiologies of the hydrocephalus were perinatal hemorrhage (20), infection (10), tumor (11), and malformations (64). Of 45 patients studied between one month and one year of age five had hypersarrhythmia. (Saukkonen A. Electroencephalographic findings in hydrocephalic children prior to initial shunting. Child's Nerv Syst Dec 1988; 4:339-343).

COMMENT. It is important to study the electroencephalogram of infants with hydrocephalus prior to shunting so that effects of increased intracranial pressure and malformations can be distinguished from those secondary to the shunt and possible infection. Spikes and sharp waves in the EEG of hydrocephalics are predictive of the prognosis and the probable occurrence of epilepsy. (Watanabe K et al. Clin electroencephalogr 1984; 15:22).

EEG AND SLIT VENTRICLE SYNDROME (SLV)

The EEG changes and the frequency and type of epilepsy in patients with slit ventricles has been analyzed in 113 shunt-treated hydrocephalic children reported from the Department of Pediatrics, University of Oulu,

Finland, and the Regional Pediatric Habilitation Center, Gothenburg, Sweden. Slit ventricles are caused by overdrainage of the cerebrospinal fluid and collapse of the ventricles following shunting of hydrocephalus. The incidence was 56% in this group of patients followed for a mean of 8.9 years. In patients who developed SLV the age at initial shunting was significantly lower (1.2 years) than for those who did not (2.7 years). Spike and sharp wave activity in the EEG developed more frequently in patients with SLV (81%) than in those without (54%). The severe generalized spike wave activity disappeared from the EEG after treatment of the slit ventricles. Epileptic seizures appeared after initial shunting in 44% of patients who developed SLV but in only 6% of the non-SLV group. Treatment of the SLV's reduced the frequency of epilepsy to the level corresponding with the non-SLV group. (Saukkonen A et al. Electroencephalographic findings and epilepsy in the slit ventricle syndrome of shunt treated hydrocephalic children. Child's Nerv Syst Dec 1988; 4:344-347).

COMMENT. This study demonstrates the value of repeated EEGs in shunt treated patients. If EEG abnormality appears after the initial shunting and especially severe spike wave activity, a shunt malfunction and overdrainage of the CSF should be suspected. The slit ventricle syndrome should be prevented or at least treated early to avoid permanent brain damage and long-term psychomotor retardation. Epileptic seizures have been reported in 10-40% of shunted hydrocephalic children. The position of the shunt, the frequency of the shunt revisions and epileptic seizures have been correlated in the present study. The ventricular size is also correlated with the frequency of epileptic seizures. Six patients suffering from West and Lemox syndromes associated with slit ventricle syndrome showed dramatic improvement and became asymptomatic after treatment for the slit ventricle syndrome. Anticonvulsant prophylactic therapy is warranted for at least a year after shunting and particularly in patients who develop slit ventricles. Raimondi AJ provides an editorial comment on shunts, indications, and characteristics (Child's Nerv Syst Dec 1988; 4:321).

CNS MALFORMATIONS

CEREBELLAR HYPOPLASIA AND AUTISM

The size of the cerebellar hemisphere and vermal lobules was measured in ten autistic and eight normal control subjects at the Neuropsychology Research Laboratory, Children's Hospital Research Center, and the Departments of Neurosciences and Radiology, School of Medicine, University of California at San Diego, LaJolla. On sagittal MRI's the cerebellar hemispheres of the autistic subjects showed hypoplasia and a near total absence of the cerebellar tonsils in one. In contrast, a comparison of the average cerebellar width measured on axial images revealed no significant difference between the autistic group and the