

CBZ-induced diarrhea appearing in the same issue of Epilepsia, the gastrointestinal side effects of CBZ need to be taken seriously and treated by prompt discontinuation of CBZ.

CEREBRAL PALSY

NEURODEVELOPMENT AND SERUM BILIRUBIN IN PRETERM INFANTS

The interrelationships of maximal total serum bilirubin concentrations, neonatal cranial ultrasonographic abnormalities, and the occurrence of cerebral palsy and developmental delay were studied in 249 preterm infants of less than 34 weeks gestation at the Departments of Pediatrics, Neurology, and Radiology, Thomas Jefferson University Hospital, Philadelphia, PA. Of 45 children with spastic cerebral palsy, all but 7 had grade III/IV intracranial hemorrhage or moderate to severe periventricular echodensity or both, and ultrasonographic abnormalities. There was no evidence that bilirubinemia (2.3 to 22.5 mg/100 mL total serum bilirubin) was causally related to cerebral palsy, early developmental delay, or periventricular cysts. Large ventricular cysts, moderate to severe periventricular echodensity, and the need for assisted ventilation were associated with the occurrence of cerebral palsy at a statistically significant level (Graziani LJ et al. Neurodevelopment of preterm infants: neonatal neurosonographic and serum bilirubin studies. Pediatrics Feb 1992; 89:229-234). (Reprints: Dr. Graziani, Department of Pediatrics, Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA 19107.)

COMMENT. The putative neurotoxic effects of serum bilirubin in the development of spastic cerebral palsy were not supported by this study of preterm infants with neurosonographic abnormalities. The authors note that the significant association between the need for mechanical ventilation and increased risk for CP in preterm infants requires further study.

The effects of neonatal bilirubin exposure on psychoeducational outcome have been studied in a group of grade school children, 9-11 years old, who required neonatal intensive care at the Department of Pediatrics, University of California, Davis, Sacramento, CA. (Hansen RL. J Dev Behav Pediatr Oct 1991; 12:287-293) A measure of bilirubin binding, calculated directly from the albumin concentration, correlated significantly with the Kaufman Mental Processing Composite Measure of Psychoeducational Outcome but other more direct measures of bilirubin exposure (maximum total serum bilirubin) did not. It is suggested that the calculated albumin - determined binding value may be more appropriate than the total serum bilirubin in assessing clinical management.