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SEIZURE DISORDERS

HIGH-RISK MARKERS FOR ASPHYXIAL NEONATAL SEIZURES

The value of clinical high-risk markers in detecting neonates having seizures within the first hour of life following intrapartum asphyxia was evaluated in term infants admitted to the neonatal intensive care unit at the University of Texas Southwestern Medical Center, Dallas, TX. Seizures developed in 5 (5.2%) of 96 infants with hypoxia ischemia or asphyxia. High-risk markers included fetal heart rate (FHRT) abnormalities only (36), FHRT abnormalities and meconium-stained amniotic fluid (MSAF) (20), MSAF only (23), 5 or less 5 min Apgar scores (21), umbilical cord arterial pH of 7 or less (21), and base deficits of -14 mEq/L (19). Significant relationships with seizures occurred with a combination of low 5-min Apgar scores, and the need for intubation in the delivery room in association with severe fetal acidemia. (Perlman JM, Risser R. Can asphyxiated infants at risk for neonatal seizures be rapidly identified by current high-risk markers? *Pediatrics* April 1996;97:456-462). (Reprints: Dr JM Perlman, University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Blvd, Dallas, TX 75235).

COMMENT. The combination of postnatal high-risk markers, 1) low 5-min Apgar score, and 2) severe fetal acidemia and intubation in the delivery room, will identify within the first hour after birth those infants at high risk for seizures resulting from perinatal asphyxia. Infants with subclinical seizures may have been overlooked since EEGs were not done routinely.

Neonatal seizures caused by asphyxia carry a poor prognosis; 43% had a poor outcome in a Dublin Collaborative study reported by Curtis PD et al, 1988. See Progress in Pediatric Neurology I & II, PNB Publ, 1991, 1994, for further articles concerning risk factors, prognosis, and the value of the EEG in prediction of continued seizure activity beyond the neonatal period.

RISK FACTORS OF INFANTILE SPASMS

The role of a genetic predisposition and other risk factors for seizures was analyzed by evaluation of records of 80 children with infantile spasms and

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