HEAD TRAUMA AND COMA

HEAD INJURY IN INFANTS AND CHILDREN

Of 738 children with head injuries (0-16 yrs) admitted to the Children's Memorial Hospital, Chicago, IL, during a 5-year period from 1981-85, 318 (43%) were less than 3 years of age and almost half of the younger group were under 1 year. A fall was the most common mechanism of injury in children under 3 years, followed by a motor vehicle accident. Post-traumatic seizures developed more commonly in children under 2 yrs (16%) than in older children (9%, entire group). The most reliable indicators of poor outcome were absent or impaired oculovestibular reflex and bilateral fixed dilated pupils. Intracranial pressure greater than 40 torr with coma scores of 3, 4 or 5 spelled fatality. The mortality of the entire group with severe head injury was 22%. (Hahn YS et al. Head injuries in children under 36 months of age. Demography and outcome. Child's Nerv Syst Feb 1988;4:34-40).

COMMENT: A modified Glasgow Coma Scale -- Children's Coma Scale -- was developed as an objective neurological assessment and prognostic indicator for the children under 3 yrs of age in this study. Points for eye-opening responses (4-1) were the same but those for best motor response and best verbal response were different for infants. Smiling, orientation to sound or verbal stimulus, or following objects were given a subscore of "5" (oriented); consolable crying but inappropriate interaction "4"; inconsistent consolable crying and moaning "3"; inconsolable crying and irritable, restless interaction "2"; no response "1". One third of the younger group showed a sequence of labile symptoms following the initial loss of consciousness, becoming agitated and irritable, followed by vomiting, sleep, and waking and playful within 24 hrs in the majority. When children were comatose longer than 6 hrs, 75% (12/16) had a poor outcome with a 50% (8/16) mortality.

CONSCIOUS LEVEL ASSESSMENT IN INFANTS

Neurosurgeons at the Adelaide Children's Hospital, King William Street, North Adelaide, SA 5006, Australia have used a paediatric version of the Glasgow Coma Scale since 1977 for assessing conscious level in infants and young children. For the best verbal response, during the first 6 months the normally conscious infant is expected to cry or grunt spontaneously or when disturbed and the expected normal score is 2. Between 6 and 12 months, the normal infant babbles and begins to vocalize and scores 3. After 12 months, words are expected with a score of 4. Orientation by 5 years of age gives a score of 5. The normal aggregate scores at different ages are as follows: birth-6 mth: 9; 6-12 mth: 11; 12-24 mth: 12; 2-5 yr: 13; over 5 yr:14. A disadvantage of the scale is the reduced sensitivity, especially in the neonate. (Reilly PL et al. Assessing the conscious level in infants and young children: a paediatric version of the Glasgow Coma Scale. Child's Nerv Syst 1988;4:30-33).

COMMENT: In an editorial comment, Dr AJ Raimondi corroborates the need for children's and infant's coma scales as substitutes for the well known Glasgow scale suitable mainly for adults. He favors an