signs of impact, and seizures on presentation were significantly correlated with child abuse ($p<0.001$). The most frequent admission diagnosis was subdural hematoma (SDH) in 73 (49%) cases, skull fracture in 20 (13%), and subarachnoid hemorrhage in 18 (12%). SDH occurred in 81% of child abuse cases compared to 28% with accidental trauma. Child abuse was the cause of 64% of all SDH in this study. Head circumference was not significantly correlated with SDH. Retinal hemorrhage (RE) occurred in 47 (36%) of 129 cases examined (15 newborns were not included because RE may occur with normal delivery). The sensitivity and specificity of RH for child abuse were 75% and 93%, respectively. RE with accidental trauma was always mild, whereas that associated with child abuse was severe. Child abuse was the cause of 90% of severe morbidity and 71% of mortality; 17.5% victims of abuse either died or were in a vegetative state. (Vinchon M, Defoort-Dhellemmes S, Desurmont M, Dhellemmes P, Accidental and nonaccidental head injuries in infants: a prospective study. **J Neurosurg (Pediatrics 4)** June 2005;102:380-384). (Reprints: Matthieu Vinchon MD, PhD, Service de Neurochirurgie Pediatrique, CHRU de Lille, 59 037 Lille, France).

COMMENT. Child abuse is a major cause of infant head trauma in this study, and also, the most frequent cause of death and morbidity from trauma. Infants with a history of perinatal illness or a dysfunctional family are at high risk for child abuse. Severe RE is highly suggestive of child abuse. SDH is more prevalent in cases of abuse compared to accidental head trauma in infants. Child abuse and clinical severity on admission are the main factors influencing outcome of infant head trauma. For a review of non-accidental head injury with particular reference to whiplash shaking injury, see Brown JK, Minns RA. **Dev Med Child Neurol** 1993;35:849-869, and **Progress in Pediatric Neurology II** PNB Publ, 1994;pp387-391.

SEIZURE DISORDERS

IMPACT OF EPILEPSY SURGERY ON MOTOR PERFORMANCE

The impact of epilepsy surgery on motor performance of 37 children (ages 1 month to 15 years) with refractory seizures was evaluated at the Wilhelmina University Children's Hospital, Utrecht, The Netherlands. Surgery involved hemispherectomy in 14 patients, and temporal (14), frontal (4), parietal (2), or central (2) resection. Presurgical spasticity was present in 17 (46%). Seizures were significantly reduced in frequency in 74% at 24 month follow-up. Muscle strength and range of motion were decreased, but activities of daily living were improved and need for caregiver's assistance was reduced in the group with spasticity. The movement assessment battery (M-ABC) and gross motor function measure (GMFM) scores were significantly improved ($P<0.05$). (van Empelen R, Jennekens-Schinkel A, Gorter JW et al. Epilepsy surgery does not harm motor performance of children and adolescents. **Brain** July 2005;128:1536-1545). (Respond: R van Empelen, Department of Paediatric Physical Therapy and Exercise Physiology, University Medical Center, Wilhelmina Children's Hospital, RM. KB 02.056.0, PO Box 85090 3508 AB, Utrecht, The Netherlands).

COMMENT. Motor function of most children undergoing surgery for epilepsy is not impaired, caregiver's assistance is reduced, and activities of daily living are improved.

Cognitive function in preschool children after epilepsy surgery. Age of seizure onset and extent of the lesion were predictive of preoperative cognitive development in 50 patients treated surgically at age 3 to 7 years; 70% were retarded, with IQ <70. At 6 months to 10 years after surgery, 11 showed IQ/DQ gains of >15 IQ points, but only in children free of seizures. Shorter duration of epilepsy was significantly associated with a postoperative increase in DQ. (Freitag H, Tuxhorn I. **Epilepsia** April 2005;46:561-567).

COGNITION AND BEHAVIOR WITH IDIOPATHIC EPILEPSIES

Cognition and behavior in 42 mainstream school children with newly diagnosed idiopathic or cryptogenic epilepsy ('epilepsy only') were compared with 30 healthy gender-matched classmate controls in a 3.5-year study at Wilhelmina Children's Hospital, Utrecht, The Netherlands. At 3, 12 and 42 month follow-up, children with epilepsy performed less well than controls on measures of learning, memory span for words, attention and behavior. Those with epilepsy who repeated a grade continued to have poor scores in Color Trails tests and made more writing errors (so-called "proactive interference"), whereas control children who repeated caught up with non-repeaters. Children with cryptogenic epilepsy scored more poorly. According to parent reports, children with recurring seizures had less behavioral problems than children in remission. Epilepsy patients in a group showed no deterioration in cognition and behavior over time, whereas individually, performance was impaired. Parental poor adaptation to the diagnosis of epilepsy and prediagnostic learning and behavior problems were associated with a child's impaired neuropsychological and school performance, whereas seizure-control or AED treatment was not a factor. (Oostrom KJ, van Teeseling H, Smeets-Schouten A et al. Three to four years after diagnosis: cognition and behaviour in children with 'epilepsy only'. A prospective, controlled study. **Brain** July 2005;128:1546-1555). (Respond: KJ Oostrom PhD, University Hospital Vrije Universiteit, Department of Medical Psychology, Children's Section, PO Box 7057, 1007 M B Amsterdam, The Netherlands).

COMMENT. The source of impairments in cognition and behavior in children with epilepsy may be found in parental attitudes and lack of acceptance of the diagnosis rather than antiepileptic drug toxicity or poor seizure control. Prediagnostic learning and behavior problems were also significant factors in continuing school difficulties. Time devoted to parental counseling is important in the management of childhood epilepsy.

A significant psychosocial impact of epilepsy on adolescents is also reported in a UK controlled study; low levels of epilepsy understanding are associated with higher levels of depression and anxiety, and lower self-esteem (Baker GA et al. **Epilepsy Behav** June 2005;6:556-562).

A survey of behavior problems in children with epilepsy conducted in Canada found that a Child Behavior Checklist demonstrated an increased frequency of elevated behavior scores for all scales, particularly for attention and social problems. Behavior problems found in 40% of the group were unrelated to the type of epilepsy, EEG or AEDs, but they were significantly correlated with the frequency of learning difficulties, present in 57%. (Keene DL et al. **Epilepsy Behav** Jun e 2005;6:581-586).