boys, had higher scores than their siblings in total behavior problems, and in internalizing, attention, thought, and somatic complaints. Children with partial seizures showed higher rates of behavior problems than those with primary generalized epilepsy syndromes, regardless of previous seizures. Behavior problems are an integral component of epilepsy syndromes, and may occur independently and preceding the onset of clinical seizures. (Austin JK, Harezlak J, Dunn DW et al. Behavior problems in children before first recognized seizures. Pediatrics January 2001;107:115-122). (Reprints: Joan K Austin DNS, RN, Indiana University School of Nursing, 1111 Middle Drive, NU403, Indianapolis, IN 46202).

COMMENT. Behavior problems sometimes precede the onset of epilepsy and occur independently of seizures and anticonvulsant drugs. Children who develop partial seizures are at greater risk of antecendent behavior disorders than those with primary generalized epilepsy syndromes. The increased rate of attentional problems evident in the children with epilepsy in the above study, and especially in those with previous symptoms suggestive of seizures, provides support for the theory of transient cognitive impairment (TCI) associated with subclinical seizures (Aicardi J. Epilepsy as a non-paroxysmal disorder. Acta Neuropediatr 1996;2:249-257; Gonzalez-Garrido AA et al. Clin Electroencephalogr Oct 2000;31:175-180; Ped Neur Briefs October 2000;14:74-75). As reviewed in our October issue of Ped Neur Briefs, children with resistant complex partial seizures have more severe thought disorder and cognitive impairments than those with primary generalized epilepsy (Caplan R et al. Epilepsia Oct 2000;41: Suppl 7;88).

In a recent study of BECTS at the Medical College of Georgia, Augusta, GA, of 22 children with centrotemporal spikes without clinical seizures, 31% had behavior problems and 17% had learning disabilities. So-called benign rolandic epilepsy may not be benign in neurodevelopmental outcome. (Yung AWY et al. Pediatr Neurol Nov 2000;23:391-395).

Antiepileptic treatment of children with behavioral and attention disorders and epileptiform EEGs without clinical seizures is controversial and of questionable value (Ped Neur Briefs Oct 2000;14:74). On the positive side, an improvement in psychosocial functioning with AED treatment was correlated with reduction in subclinical EEG epileptiform discharges in 8 of 10 children (Marston D et al. Dev Med Child Neurol 1993;35:574-581). The opposite, negative results were reported following treatment of a group of 8 children with behavior disorders and EEG epileptiform discharges without clinical seizures; valproate had adverse effects on learning, memory, and behavior (Ronen GM et al. Dev Med Child Neurol 2000;42:751-755; Ped Neur Briefs Dec 2000;14:92). The need for controlled studies of the effects of various AEDs on TCI and behavior in children with epileptiform EEGs without seizures is indicated.

SHUDDERING ATTACKS

The pathophysiology of shuddering attacks in 4 infants, ages 8 to 14 months, was studied using video-electroencephalographic monitoring, at the Epilepsy Center, Nishi-Niigata Central National Hospital, Niigata, Japan. Attacks occurred in clusters while awake, from a maximum of 5 to >100 daily, and a duration of 5-6 seconds. They included staring, straining, and shivering involving the head and upper extremities, without impairment of consciousness. Unusual movements included rare opisthotonic postures, clenching of teeth and hands, and eye deviation. Changing of diapers and being fed at meal times would often precipitate attacks. At follow-up at 25 to 45 months of age, attacks had resolved in one and occurred rarely (weekly to once every 3 months) in 3. Three

were born prematurely. MRI was normal in 2, showed hypoplasia of the corpus callosum in 1, and a flattened sella turcica in 1. The EEG was normal, except for EMG contamination during attacks in 2. The EMG records had the same frequency as essential tremor. One had a positive family history of epilepsy. (Kanazawa O. Shuddering attacks-report of four children. Pediatr Neurol Nov 2000;23:421-424). (Respond: Dr Osamu Kanazawa MD PhD, Department of Pediatrics, Epilepsy Center, Nishi-Niigata Central National Hospital, I-14-I Masago, Niigata 950-2085, Japan).

COMMENT. Shuddering attacks (SA) are an uncommon benign disorder of infants and young children, with movements resembling shivering and straining, without impaired consciousness or epileptiform EEG, and showing resolution or improvement by 2 or 3 years of age. One previous report considered SAs an early manifestation of essential tremor (Vanasse M et al. Neurology 1976;26:1027-30). They may be misdiagnosed as epilepsy.

Infantile tremor syndrome due to magnesium nutritional deficiency (Meningoencephalitic syndrome) should also be considered in differential diagnosis. This syndrome occurs in Indian infants between ages 6 months and 2 and 1/2 years and is associated with severe malnutrition. The tremor is rapid and disappears in sleep. Serum, CSF, and urine magnesium levels are decreased. Tremors respond to magnesium, but a complicating delay in psychomotor development is not corrected. (Chaparwal BC et al. Dev Med Child Neurol 1980;22:252; Menkes JH, 1980).

PURPLE GLOVE SYNDROME WITH ORAL PHENYTOIN OVERDOSE

The occurrence of purple glove syndrome following the inadvertent oral administration of 1000 mg phenytoin/day is reported in a 10-year-old 18 kg handicapped boy who was admitted in coma to the Niigata City General Hospital, Japan. Within a few hours of the initial overdose, the boy was drowsy and he had nystagmus and vomiting. Several hours later, he developed dark purple discoloration and marked swelling of his hands and feet. After 4 days of the continued treatment, the boy became comatose, and his mother discontinued the drug. On admission, and 2 days after discontinuing treatment, the blood phenytoin level was 78 mcg/ml. The discoloration and swelling of the extremities gradually subsided and resolved completely after 11 days, without sequelae. (Yoshikawa H. Purple glove syndrome caused by oral administration of phenytoin. J Child Neurol Nov 2000;15:762). (Respond: Dr Hideto Yoshikawa, Department of Pediatrics, Niigata City General Hospital, 2-6-1 Shichikuyama, Niigata 950-8739, Japan).

COMMENT. Purple glove syndrome is a rare complication of intravenous administration of phenytoin. This appears to be the first report of the syndrome associated with oral phenytoin, administered in an overdose (55 mg/kg/d). Both hands and feet were affected in a glove and sock distribution. Recovery was complete without sequelae.

FAILED SURGERY FOR EPILEPSY

Persistent or recurrent seizures occurring at least monthly are reported in 51 (18%) of a series of 282 consecutive temporal resections for medically intractable epilepsy performed at Kings College Hospital, London, UK. Mean age at original surgery was 26 years (range 4 to 59 years), and the mean follow-up interval to reassessment was 6 years (range 3-17 yrs). Detailed assessment of postoperative seizures showed that of 20 with mesial temporal sclerosis (MTS), 14 (70%) had seizures arising in the hemisphere of the resection, and 35% from the contralateral hemisphere. Of 10 patients with dysembryoplastic neuroepithelial