had no effect. Other reflex epilepsies induced by higher mental activity include reading epilepsy, graphogenic epilepsy induced by writing, language induced epilepsy induced by reading, writing, and speaking, epilepsia arithmetices induced by calculation, decision making epilepsy induced by cards and game playing, and drawing induced seizures induced by geometric designs. Nintendo and Rubik's cube may also cause reflex epilepsy.

CORPUS CALLOSOTOMY FOR INTRACTABLE SEIZURES

The results of corpus callosotomy in 18 patients 16 years old and younger are reported from the Sections of Neurology and Neurosurgery, Dartmouth-Hitchcock Medical Center, Hanover, NH. A significant improvement with a decrease in seizure frequency of greater than 80% occurred in 83% of patients having generalized atonic, tonic, or tonic-clonic seizures. There was no postoperative deterioration in behavior, memory, or language function when the callosotomy was performed as a two stage procedure. Some patients had a very mild and transient hemiparesis that resolved in a few days but none developed persistent mutism, a reported complication in other series. Many generalized seizures were converted to focal seizures postoperatively. Partial seizures are usually not responsive. Patients with evidence of unilateral disease tend to have the best results from callosotomy while those with generalized infantile spasms, Lennox-Gastaut syndrome, or anoxic encephalopathy have less predictable results. Mental retardation is not a contraindication and improvement in control of the seizures may improve behavior and cognitive functioning. (Nordgren RE et al. Corpus callosotmy for intractable seizures in the pediatric age group. Arch Neurol April 1991; 48:364-372).

COMMENT. Callosotomy may be considered in young patients with frequent generalized atonic, tonic, and tonic-clonic seizures. Early surgical intervention may prevent the adverse effects of frequent recurrent seizures and the possibility of kindling.

CORTICOSTEROIDS FOR LANDAU-KLEFFNER SYNDROME

Four children between five and nine years of age with Landau-Kleffner syndrome were treated with ACTH or corticosteroids at the Department of Pediatrics, Beilinson Medical Centre, and Sackler Faculty of Medicine, Tel Aviv University, Israel. ACTH in one patient was given for three months starting with 80 units/day followed by a gradual reduction of the dose. An EEG three weeks after the start of the treatment showed complete disappearance of epileptic activity but the aphasia was initially unchanged. Complete remission of the aphasia occurred eight months after the completion of the ACTH course. Two years later the aphasia recurred with the concomitant appearance of multiple spike discharges on the EEG. Prompt prescription of ACTH therapy led to a recovery of speech and a normal EEG within a few weeks. Prednisone 60 mg/day for two to three months in two patients caused a prompt improvement in the EEG followed by normal speech. Dexamethasone 4 mg/day resulted in full recovery of speech and a

completely normal EEG within two weeks of starting treatment in a nine year old child. Three to six years after discontinuing therapy the children are off anticonvulsant medication and free from seizures and language disability. (Lerman P et al. Effect of early corticosteroid therapy for Landau-Kleffner syndrome. Dev Med Child Neurol March 1991; 33:257-266).

COMMENT. These results are encouraging and warrant further trials of hormone therapy in children with the aphasic epilepsy syndrome. As in the treatment of West syndrome, corticosteroids administered early are more effective than delayed treatments.

Hypsarrhythmia is not a sine qua non for ACTH therapy. Two children, aged 3 years and 2 years 8 months with status absence and generalized tonic-clonic seizures refractory to anticonvulsant medication were benefitted by ACTH 10 units intramuscular daily. Control of seizures, improvement in the EEG, and a dramatic recovery of mental and motor abilities occurred within two hours of the first injection in one patient and seizure control and EEG improvement occurred in the second after a three week course of therapy. Further trials of ACTH in children with seizures other than infantile spasms are recommended. (Millichap JG. Neurology March 1991; 41 (Suppl 1):201).

SEIZURE ETIOLOGY IN DOWN SYNDROME

The etiology of seizures in 47 infants, children, and young adults with Down syndrome was examined at The Floating Hospital for Infants and Children, Boston, MA and the Institute for Basic Research in Developmental Disabilities, Staten Island, NY. Of a total of 737 patients with Down syndrome, 47 (6%) had seizures; and 24 had an identifiable etiology usually related to a complication of Down syndrome, including neonatal hypoxia-ischemia, hypoxia from congenital heart disease, or infection. The infections were bacterial meningitis 3, viral meningoencephalitis in 1, brain abscess 1, febrile seizures 2. The patterns of the seizures in those of known etiology were generalized tonic-clonic in 18, infantile spasms in 2, myoclonic 2, absence 1, simple partial 3, and complex partial 1. Mixed partial and generalized seizures occurred in 2. Of 12 patients with seizures related to cardiovascular disease 4 died of complications of acute heart failure. Neonates with hypoxic ischemic injury had relatively poor outcomes. The authors recommend that all Down syndrome patients with seizures be thoroughly evaluated to determine the etiology. (Stafstrom CE et al. Seizures in children with Down syndrome: Etiology, characteristics and outcome. Dev Med Child Neurol March 1991; 33:191-200).

COMMENT. Febrile seizures occurred in only two (0.9%) of the author's patients during the susceptible age range. The relative rarity of febrile seizures in Down syndrome is contrasted with the relatively frequent occurrence of infantile spasms. Wisniewski KE, one of the authors, has previously studied the arrest of neurogenesis and synaptogenesis in brains of patients with Down syndrome. (N Engl J Med 1984; 311:1187). Long necked