conversion seizures. Attacks were characterized by auditory hallucinations, vertigo, automatisms, screaming, and impaired consciousness. A simple partial seizure progressed to a complex partial seizure and then evolved into a NES. She had a history of sexual abuse. MRI revealed right frontoparietal dysplasia, an area critical for impulse control and behavioral inhibition. The epileptic seizure may trigger the conversion NES, especially in a patient with right frontal lobe pathology.

EMERGENCY CT IN NEW ONSET SEIZURES

A retrospective analysis of 107 neurologically normal children with emergency brain scans for new-onset seizures is reported from the Children's National Medical Center, Washington, DC. In 8 (7%), the seizures were nonepileptic (gastroesophageal reflux, syncope, rigor). In 49 of the remaining 99, seizures were provoked (complicated febrile seizure, encephalitis, toxic or metabolic), and in 50, they were unprovoked. CT abnormalities identified in 19 required further investigation or intervention in 7 (tumors in 2, vascular anomalies in 3, cysticercosis in 1, and obstructive hydrocephalus in 1). First seizures unprovoked by fever or metabolic causes, and especially focal seizures, were most likely to have underlying pathologies demonstrated on emergency CT and requiring intervention. (Garvey MA, Gaillard WD, Rusin JA et al. Emergency brain computed tomography in children with seizures: who is most likely to benefit? J Pediatr Nov 1998;133:664-669). (Reprints: WD Gaillard MD, Department of Neurology, Children's National Medical Center, 111 Michigan Ave, NW, Washington, DC 20010).

COMMENT. Emergency CT is indicated in a previously well child with a new-onset unprovoked seizure, especially if the seizure is focal. A first seizure with fever is unlikely to be symptomatic of an unexpected brain lesion demonstrable by CT and requiring intervention. A careful neurologic exam performed within 24 hours of the seizure, to exclude localized abnormalities and asymmetry of signs, is essential in determining the need for CT. When the history is unreliable, the neurologic signs of uncertain significance, and follow-up unavailable, a CT is advisable before the patient is discharged.

EPILEPSY SURGERY OUTCOME

Seizure outcome was studied in 136 children receiving surgery for intractable epilepsy at the Cleveland Clinic between 1990 and 1996. The postoperative follow-up period was 1 to 7.5 years (mean, 3.6 years). Cortical dysplasia and low-grade tumor were the most common causes; hippocampal sclerosis was rare. A seizure-free outcome achieved in 60-69% of patients was more frequent in patients requiring temporal resections (74-80%) than in those with extratemporal or multilobar resection (52-58%), and also among patients with tumor (82%) compared to those with cortical dysplasia (52%). Age was not a factor; the frequency of a seizure-free outcome was similar for infants, children, and adolescents, and comparable to reports of adult series. (Wyllie E, Comair YG, Kotagal P et al. Seizure outcome after epilepsy surgery in children and adolescents. Ann Neurol Nov 1998;44:740-748). (Respond: Dr Wyllie, Pediatric Epilepsy Program, The Cleveland Clinic Foundation, 9500 Euclid Ave, Cleveland, OH 44195).

COMMENT. The risk/benefit ratio for surgery of intractable epilepsy varies with the pathology and localization of the lesion. Patients with low-grade tumors and foci located in the temporal lobe have a better outcome than those with cortical dysplasia and extratemporal or hemispheric localization. Outcome is not

dependent on age, and delayed surgery may result in psychosocial deterioration.

Etiology as a risk factor for medically refractory epilepsy, and a case for early surgical intervention are presented in a study of 2,200 patients, ages 16 and older, from La Salpetriere Hospital, Paris (Semah F, Picot M-C, Adam C, et al. Is the underlying cause of epilepsy a major prognostic factor for recurrence? Neurology Nov 1998;51:1256-1262), and in an editorial (Engel J, Jr. Neurology Nov 1998;51:1243-1244). Early surgical intervention is recommended for mesial temporal lobe epilepsy (MTLE), the most common and most medically refractory localization-related epilepsy syndrome. If operation is delayed, MTLE has a progressive course, with more severe seizures over time, and associated cognitive and psychosocial disabilities may become irreversible.

Surgery of epilepsy in tuberous sclerosis is evaluated at the Montreal Neurological Institute. (Guerreiro MM, Andermann F, Andermann E et al. Neurology Nov 1998;51:1263-1269). Among 18 patients, 12 having a single tuber or well-localized epileptogenic lesion and treated by lesionectomy or focal resection have the best outcome. Patients without good imaging and EEG correlation respond only partially to corpus callostomy.

Long-term outcome of tuberous sclerosis epilepsy is studied at Okayama University, Japan. (Ohtsuka Y, Ohmori I, Oka E. Epilepsia Nov 1998;39:1158-1163). Twelve (32%) of 38 patients were seizure-free for >1 year at the mean 14 year follow-up (range, 3 to 30 years). Seizures were generalized in 11, partial and localized in 10, and they changed from generalized to localization-related epilepsies during the clinical course in 17. Neither location nor number of tubers is related to the long-term outcome. Seizure and mental outcomes are least favorable in those with generalized seizures, including West and Lennox-Gastaut syndromes; only 18% seizure free and 9% with a normal mentality.

CLONIDINE-ACTIVATION OF EPILEPTIC FOCI

The effects of clonidine, an adrenergic a2 agonist hypotensive agent, and methoxital, a short-acting barbiturate anesthetic, on epileptiform discharges detected by presurgical magnetoencephalography (MEG) were investigated in 14 patients with medically intractable focal epilepsies treated at the University of Erlangen-Nuernberg, Germany. Oral premedication with clonidine increased focal epileptiform discharges in 9 and induced complex partial seizures in 2 patients. Methoxital increased total number of epileptic MEG discharges and the number of spikes contributing to MEG source localizations in 8 patients. Both drugs have proconvulsant effects and may be used as activating agents for localization of epileptogenic foci in EEG, electrocorticography, and MEG. (Kirchberger K, Schmitt H, Hummel C et al. Clonidine- and methoxital-induced epileptiform discharges detected by magnetencephalography (MEG) in patients with localization-related epilepsies. Epilepsia Oct 1998;39:1104-1112). (Reprints: Dr K Kirchberger, Department of Neurology, University of Erlangen-Nuernberg, Schwabachanlage 6, D-91054 Erlangen, Germany).

COMMENT. Clonidine is a second line treatment for children with ADHD, and is especially indicated in those with tics or sleep disorders secondary to methylphenidate. The most frequent side-effect is drowsiness, and an epileptogenic effect in patients has not previously been reported.

Laboratory studies in animals with experimental seizures have demonstrated both anticonvulsant and convulsant effects with clonidine,