those benefitted, the diazepam sensitivity test had been positive in 76%. Of 11 patients unresponsive to oral benzodiazepines, only 36% had shown a positive sensitivity test. The authors conclude that the test is of value in long-term management of intractable childhood seizures but emphasize the variability and unpredictability of the response to oral benzodiazepines. (Livingston JH et al. Benzodiazepine sensitivity testing in the management of intractable seizure disorders in childhood. Electroencephalography and Clin Neurophysiol 1987:67:197-203).

COMMENT. This practical study confirms the value of the EEG and intraveneous drug sensitivity in the management of childhood epilepsy but with some limitations. It contradicts the recommended choice of benzodiazepines in the treatment of non-convulsive status (Gastaut H. Adv Neurol 1983:34:15-36. Editorial, Lancet 1987:1:958). Development of tolerance is the greatest limitation to the long-term use of benzodiazepines in myoclonic and other epilepsies, occurring in 80% of 36 children treated with nitrazepam at Children's Memorial Hosp, Chicago (Millichap JG, Ortiz W. Amer J Dis Child 1966:112:242).

VIGABATRIN IN DRUG-RESISTANT EPILEPSY

A double-blind, placebo-controlled, crossover study of oral Vigabatrin (2-3 g/d) as add-on therapy for 31 patients with drug-resistant seizures is reported from the Neurological Clinic, Univ of Bologna School of Med, Italy. Both children and adults were included. Those with complex partial seizures and temporal spikes responded whereas patients with mixed seizure types and multi-focal EEG abnormalities were not benefitted. Drowsiness was the most frequent side-effect and concomitant phenytoin serum concentrations fell during Vigabatrin treatment. (Tassinari CA et al. Double-blind study of Vigabatrin in the treatment of drug-resistant epilepsy. Arch Neurol 1987:44:907-910).

COMMENT. Vigabatrin (γ-vinyl GABA) is an inhibitor of γ-aminobutyric acid (GABA)-transaminase. Increases in CNS-GABA concentrations in laboratory animals and CSF-GABA in patients treated with Vigabatrin have been associated with anticonvulsant activity. Several laboratory and clinical reports of this drug have appeared in the literature in the past decade, mostly with favorable results in patients with complex partial seizures (see Browne TR et al. Neurology 1987:37:184. Rimmer EM, Richens A. Lancet 1984:1:189).

The finding of microvacuoles in the white matter of the CNS of laboratory animals has not been duplicated in autopsy reports on patients who have died from causes independent of Vigabatrin therapy or in CT scans but has prompted the FDA to put a hold on clinical trials in the USA since 1983. At present, 31 adult patients with complex partial seizures are in the on-going collaborative study but no patient may be added (R. Miketta, M.D., Merrell Dow Pharmaceuticals, personal communication). Phase III trials are continuing in other countries and registration of the drug is expected in France in 1988. Side effects in adults treated with Vigabatrin for complex partial seizures have included drowsiness, ataxia, dizziness, headache and skin rash. Levels of SGPT have shown decreases, as might be expected, but no liver or blood disorders have been reported.

Every anticonvulsant drug, both old and new, has its problems, and clinical trials are fraught with potential hazards (e.g. liver fatalities with valproate, leukopenia with carbamazepine, erythe multiforme and lymphoma with phenytoin, and learning disorders with barbiturates). Hopefully, the Vigabatrin-induced CNS vacuoles in animals will prove to be a species specific effect but close monitoring in man is required.

CAUSES OF ANTIEPILEPTIC TREATMENT FAILURE

The Veterans Administration Epilepsy Cooperative Study Group (Regional Epilepsy Center, VA Med Cntr, 4500 S Lancaster Rd, Dallas, TX) have evaluated monotherapy with carbamazepine, phenobarbital, phenytoin, and primidone in a total of 622 patients with previously untreated partial seizures, with particular attention to seizure frequency, neurotoxicity, and systemic toxicity. These 3 factors contributed equally to failure in the first 6 months but systemic toxicity, primarily skin rash, played a relatively minor role in drug failure after that time interval, with the same pattern seen for all drugs studied. After 6 months, failure is determined by seizure frequency and neurotoxicity and is relatively low. A failure rate of 25.3 patients/month during the first 6 months was approx. 6.5 times that during the following 18 months (3.9 patients/month). The first 24 months were critical for successful control since after that time the failure rate falls rapidly to 0.83 patients/month during a 12 month period follow-up. (Homan RW, Miller MS. Causes of treatment failure with antiepileptic drugs vary over time. Neurology 1987:37:1620-1623).

COMMENT: Such studies would be difficult to duplicate in children although similar results might be expected. That dermatologic, hypersensitivity reactions should occur primarily during the first few months of a new antiepileptic drug (AED) treatment is not surprising. It is likely that the majority would have developed within the first 2 weeks. The incidence of skin rash in the first 6 months of this study involving only adults was 6% and similar to that encountered in children taking phenytoin but higher than that usually reported for carbamazepine (3 to 5%) phenobarbital (1 to 2%) and primidone (rare). AED hypersensitivity reactions are generally more prominent in young children than in adults (e.g. phenytoin, valproate).

DRIVING AND EPILEPSY

Of 400 drivers with epilepsy questioned, 133 admitted having one or more seizures at the wheel, and 17% had resulting accidents. The authors from the Institut de Reserches Neurologiques, Marseille, France, and Dept Neurology, SUNY Health Sciences Center at Brooklyn, NY, attempting to relate the risk of accidents to the type of seizure, were able to characterize 109 attacks in 82 subjects of which 55% led to an accident. Young drivers accounted for one half those with seizures at the wheel and a complex partial seizure usually without aura was the most common pattern, being responsible for 88% of the accidents. Those with auras were significantly less likely to lead to accidents. Many of the patients were driving illegally, 46% having seizures at least monthly and 74%, at