

management. Dev Med Child Neurol 1995;37:226-231). (Respond: Dr SJ Wallace, Department of Child Health, University Hospital of Wales, Heath Park, Cardiff CF4 4XW, Wales, UK).

COMMENT. The importance of epilepsy prevention is stressed both in the US and UK current literature. The release of excitotoxic amino acids such as glutamate and aspartate from discharging neurons, with further cerebral damage as a consequence of uncontrolled seizures is cited as a reason for optimal control. Neurological, psychological and social dysfunction resulting from poorly controlled epilepsy are additional reasons for closer attention to the prevention of seizures and their consequences. The failure of rectal diazepam administered in the home in 6 patients admitted in status epilepticus might be explained by the inadequate instruction or compliance of parents.

## OUTCOME OF STATUS EPILEPTICUS

Treatment practice and outcome of generalized convulsive status epilepticus (GC-SE) in The Netherlands were studied at the Dr Hans Berger Clinic, Breda and University Hospital, Nijmegen, The Netherlands. SIG, a Dutch documentation center that collects nationwide hospital statistics, showed an average annual GC-SE frequency of 344 in patients aged >15 years, with an annual mortality of 24. Of 346 admissions collected at 12 hospitals and 2 epilepsy centers 236 (68%) had known previous epilepsy. Analysis showed that factors important in outcome were the underlying cause, noncompliance with AED treatment, and systemic infection. Of 38 patients who died, 44% had received insufficient therapy. This percentage was higher (62%) in patients dying as a result of SE itself. Duration of SE >4 hours caused an increase in morbidity and mortality, especially in those where GC-SE itself was responsible rather than some underlying cause. Outcome was related to the occurrence of medical complications: respiratory insufficiency and aspiration, cardiac arrhythmias, hypotension, renal and/or hepatic failure, and rhabdomyolysis were associated with a poor prognosis. Inadequate management led to several complications and a worse outcome. (Scholtes FB, Renier WO, Meinardi H. Generalized convulsive status epilepticus: causes, therapy, and outcome in 346 patients. Epilepsia 1995;35:1104-1112). (Reprints: Dr FB Scholtes, Dr Hans Berger Clinic, PO Box 90108, 4800 RA Breda, The Netherlands).

COMMENT. A poor outcome of convulsive status epilepticus is determined particularly by the underlying cause but also by a duration of SE greater than 4 hours, by the occurrence of one or more medical complications, and by inadequate anticonvulsant therapy. Therapies most frequently employed in the management of convulsive status epilepticus in The Netherlands were clonazepam, diazepam, and phenytoin.

**Status Epilepticus and Seizure Recurrence.** Shinnar S, Berg AT, and Moshe SL, at the Albert Einstein College of Medicine, Bronx, NY, report a study of the effect of status epilepticus on the long-term outcome of a cohort of 342 children and adolescents prospectively followed for a mean of 72 months from the time of their first idiopathic unprovoked seizure (Dev Med Child Neurol March 1995 (suppl 72);37:116 [abstract]). Status epilepticus was the first seizure in 38 (11%). At follow-up, 127 (37%) had experienced a seizure recurrence, including 42% of

those who presented with status and 37% of those who had a briefer first seizure. The occurrence of status epilepticus did not appear to have an adverse effect on outcome in the children in this study.

## EEG BACKGROUND ACTIVITY AND ANTICONVULSANT DRUGS

The effects of antiepileptic drugs (AED) on EEG background activity in 37 newly treated children with epilepsy were examined at the Departments of Pediatrics, Faculty of Medicine, Toyama Medical and Pharmaceutical University, Toyama City, Japan. Compared to 46 age-matched healthy controls, the EEGs in children with epilepsy, before AED therapy, showed significant slowing. Both idiopathic and symptomatic epilepsies were associated with EEG slowing. Following 3 to 6 months of AED therapy, the EEG slowing was increased in 23 taking carbamazepine for partial seizures and reduced in the 14 treated with valproic acid for generalized seizures. Despite continuous treatment with carbamazepine, after 1 year the background activity had slowly increased in frequency with age. (Konishi T et al. Effects of antiepileptic drugs on EEG background activity in children with epilepsy: initial phase of therapy. Clin Electroencephalogr April 1995;26:113-119). (Reprints: Tohru Konishi MD, Department of Pediatrics, Faculty of Medicine, Toyama Medical and Pharmaceutical University, 2630 Sugitani, Toyama City, 930-01 Japan).

COMMENT. EEG background activity in children with epilepsy may be slowed because of underlying central nervous system dysfunction related to the epilepsy itself as well as the result of treatment with certain anticonvulsant drugs. Patients with partial epilepsy may be more sensitive to slowing than those with generalized seizures, but drugs such as carbamazepine may exacerbate the tendency to EEG slowing while valproic acid decreases delta activity and is associated with increased EEG frequencies.

## SURGERY FOR PARTIAL SEIZURES AND CORTICAL DYSPLASIA

The role of ictal or continuous epileptogenic discharges (I/CEDs), recorded during intraoperative electrocorticography (ECoG), in the planning of surgical resection for patients with cortical dysplastic lesions (CDyLs) and intractable partial seizures was evaluated at the Montreal Neurological Institute, the Epilepsy Surgery Program, Porto-Alegre, Brazil, and the Chonbuk National Hospital, Chonju, Korea. I/CEDs, consisting of repetitive electrographic seizures, repetitive bursting discharges, or continuous rhythmic spiking, were present in 23 of 34 patients (67%) with seizures associated with CDyLs, and in 1 of 40 (2.5%) whose partial epilepsy was associated with other types of structural lesions. A favorable surgical outcome was obtained in 75% of patients when the cortical dysplastic tissue showing I/CEDs was completely excised, whereas the outcome was poor if areas containing I/CEDs remained in situ. The authors advocate the removal as much as possible of the cortical dysplastic lesion that is visible and also those areas showing I/CEDs on acute ECoG. (Palmini A, Gambardella A, Andermann F et al. Intrinsic epileptogenicity of human dysplastic cortex as suggested by corticography and surgical results. Ann Neurol April 1995;37:476-487). (Respond: Dr Palmini, Servico de Neurologia, Hospital Sao Lucas-PUCRS, Av Ipiranga 6690, Porto Alegre RS, Brasil CEP 90610-000).

COMMENT. The extent of surgical excision for optimal seizure control in these patients was determined by the intraoperative