room, intravenous diazepam is preferred in a dosage of 0.25 to 0.3 mg/kg with a glass syringe. Third line management in intensive care includes 20% mannitol given over 20 minutes in a dose of 7 ml/kg for cerebral edema. EEG monitoring is essential to demonstrate seizure activity, paradoxical reactions to drugs such as diazepam, and overdosage with drugs, eg barbiturates causing burst suppression. The authors stress the need to consider Hemophilus influenzae and pneumococcal meningitis as an underlying cause of status epilepticus and caution that lumbar puncture must never be done in an unconscious child without a CT scan to exclude signs of brain swelling or edema. The need for resulting from inappropriate anticonvulsant medication rather than drug resistance. (Brown JK, Hussain IHMI. Status epilepticus II: Treatment. Dev Med Child Neurol Feb 1991; 33: 97-109).

<u>CONMENT</u>. The primary care of seizures is all important so that status epilepticus of prolonged duration may be avoided. Mortality from status epilepticus is usually the result of the underlying disease with an 8% incidence at the above institution. A paradoxical convulsant response to the anticonvulsant diazepam should be considered in children whose seizures are not rapidly controlled, and an alternative anticonvulsant should be used (Livingston and Brown, 1988).

The home use of rectal diazepam for cluster and prolonged seizures is reported from the Department of Neurology, Hennepin County Medical Center; Department of Pharmacy Practice, University of Minnesota, Minneapolis; and the Department of Pediatric Neurology, Gillette Children's Hospital St. Paul, Minnesota (Kriel RL, Cloyd JC et al. Pediatr Neurol Jan/Feb 1991; 7:13-17). Rectal diazepam was effective in controlling seizures in 85% of patients. Adverse reactions were mild and consisted of drowsiness and/or behavioral changes. Improvements in quality of life associated with the availability of rectal diazepam were observed by 58% of users and 27% of nonusers. In addition to improved management of seizures there was increased flexibility in family activities and less parental anxiety. The diazepam injectable solution in a dose ranging from 0.3 to 0.5 mg/kg was used for It was administered with a needleless rectal administration. lubricated 3 ml plastic syringe inserted 2 to 4 cm into the rectal cavity. Effective serum concentrations are usually reached within ten minutes.

## METHSUXIMIDE FOR INTRACTABLE SEIZURES

The use of methsuximide in 25 children with intractable epilepsy is reported from the Department of Neurology and School of Phanmacy, University of North Carolina, Chapel Hill. In 15 patients methsuximide was well tolerated and resulted in a 50% or greater reduction in seizure frequency. The predominant seizure types were tonic, complex partial, secondary generalized and astatic/myoclonic. The EEG showed generalized slow spike and wave in 14 and focal spikes in three. Two developed hypersensitivity rashes, two had intractable hiccups and four reported nausea. Patients had failed therapy with phenobarbital, primidone, phenytoin, carbamazepine and valproic acid alone or in various combinations. Decreases in carbamazepine serum concentrations occurred after starting methsuximide as an adjunctive anti-epileptic. (Tennison MB et al Methsuximide for intractable childhood seizures Pediatrics Feb 1991; 87: 186-189).

 $\underbrace{\text{CCMMENT.}}_{\text{treatment of}} \quad Methsuximide has been reported of benefit in the treatment of petit mal, partial myoclonic, atonic and tonic seizures. As monotherapy methsuximide is not well established, but as an adjunct therapy further trials should be contraindicated in patients with a history of hypersensitivity reactions to other anticonvulsants.$ 

## VAGUS NERVE STIMULATION FOR CONTROL OF EPILEPSY

Results of intermittent stimulation of the vagus nerve in four patients with intractable partial seizures are reported from the Department of Neurology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem, NC. The criteria for implantation of the device were 1) refractory partial seizures, 2) adequate trials of anti-epileptic drugs, 3) adequate trials of investigational drugs, 4) age 18 to 55 and 5) not a candidate for epilepsy brain surgery. The stimulation electrodes are placed around the vagus nerve at or above the omohyoid muscle. The leads are tunneled through to a subcutaneous pocket in the subclavicular region and connected to the pulse genera-Complex and simple partial seizures as well as secondarily tor. generalized seizures were reduced by 100% in patients 1 and 2 and by 40% in patient 4. Side effects were transient and occurred concomitantly with stimulation and included hoarseness and a stimulation sensation in the neck. One patient had an episode of uncontrolled hiccups. (Penry JK. Dean JC. Prevention of intractable partial seizures by intermittent vagal stimulation in humans: preliminary results. Epilepsia: 1990; 31 (Suppl 2):S40-43).

<u>COLMENT</u>. Five patients age 20 to 59 with complex partial seizures received vagus nerve stimulation at the Neurology Service and Neurological Surgery Section, Department of Veteran's Affairs Medical Center, Gainesville, Florida (Uthman, EM, Wilder BJ et al. <u>Epilepsia</u> 1990; 31 (Suppl 2): S44-S50). Three patients had a greater than 50% reduction in seizure frequency. The battery life of the stimulator is approximately two years and cost of replacement is comparable to that of a five year supply of anti-epileptic drugs. Vagal stimulation may offer an option of treatment before temporal lobectomy and in patients with bilateral independent epileptogenic foci.