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SEIZURE DISORDERS

DIAZEPAM FOR FEBRILE SEIZURES

The efficacy and side effects of intermittent oral diazepam for the prevention of febrile seizure recurrence were investigated in the Departments of Clinical Pharmacology, Neurosurgery, and Biostatistics, University of Tours, France. Between May 1985 and June 1988, 185 children, eight months to three years of age, with a first febrile seizure and normal neurological development were randomly assigned in a double-blind fashion to receive oral diazepam (0.5 mg/kg, then 0.2 mg/kg every 12 hours) or placebo, whenever the rectal temperature was more than 38°C. The duration of the study was three years and eight different centers in France participated. There were 462 febrile episodes and 1000 days with prophylactic treatment. The seizure recurrence rate in the diazepam group was 16% and in the placebo group 19.5% and the difference was not significant. Those with recurrent seizures were aged 17 ± 6.9 months and those with no recurrence were 21 ± 8.5 months at the time of the first seizure. In children with seizure recurrence, diazepam had been correctly administered in only one of 15 children and the placebo had been given in seven of 18 children with recurrences. Poor compliance with the intermittent treatment was explained by 1) seizure as the first manifestation of the fever in seven cases in each group, 2) noncompliance by parents in nine cases, and 3) patient refusal to take treatment in two. Hyperactivity was more frequent as a side effect in the diazepam than in the placebo group. The findings reflect a lack of efficacy of the intermittent method of treatment rather than the diazepam itself. (Autret E et al. Double-blind, randomized trial of diazepam versus placebo for prevention of recurrence of febrile seizures. J Pediatr September 1990; 117:490-494).

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COMMENT. The poor compliance rate which might explain the lack of efficacy of the intermittent diazepam prophylaxis in this study is disappointing and dampens the growing enthusiasm for this form of therapy as a substitute for continuous phenobarbital prophylaxis. The conclusion of Dr. Rosman's controlled study of oral diazepam is eagerly awaited.

In a recent national survey of pediatric neurologists, 22% recommended the use of intermittent prophylactic therapy with diazepam in an average dose of 0.46 mg/kg/day; oral diazepam was preferred by 8% and rectal administration was used by 16%. An alternate drug, lorazepam or clonazepam, was preferred by 2%. (Millichap JG et al. Ann Neurol September 1990; 28:444).

SHIGELLA-ASSOCIATED RECURRENT SEIZURES

The risk of subsequent febrile or nonfebrile seizures following Shigella-associated convulsions was investigated in 55 children in a ten year follow-up study at the Assaf Harofeh Medical Center and the Sackler School of Medicine, Tel Aviv University, Israel. Only two children (3%) had recurrent episodes of febrile convulsions and none had nonfebrile seizures. The incidence of recurrent seizures in this group of patients was similar to that observed in the general population and significantly different from the average estimated recurrence rate of febrile seizures (33%). (Lahat E et al. Recurrent seizures in children with Shigella-associated convulsions. Ann Neurol September 1990; 28:393-395).

COMMENT. Among 1292 patients with convulsions associated with Shigellosis in nine publications in the literature, the incidence of seizures varied from 4% to as high as 45% with an average of 13%. Among 2241 patients in two studies of Shigella negative diarrheas the incidence of convulsions was only 1.7%. The higher incidence of febrile seizures with shigellosis in comparison with Shigella negative diarrheas was unexplained by neurotoxin formation and could be related to differences in severity of the infections, the height of the fever, and complications of water and electrolyte imbalance. (Millichap JG. Febrile convulsions. Macmillan Company, New York, 1968). The present study suggests that Shigella-associated convulsions are benign and not associated with an increased incidence of either febrile or nonfebrile seizures. An hereditary factor to explain an increased incidence of convulsions with Shigella infections was not supported by this study.

EPILEPSY AND HEMIPARETIC CEREBRAL PALSY

The incidence of epilepsy, the IQ, and laterality of cerebral palsy were investigated in 51 children with hemiparetic CP at the Department of Neurology, Charles University, Katerinska, Praha, Czechoslovakia. Epilepsy had developed in 19; two had partial jacksonian seizures and 17 generalized tonic-clonic seizures. Epileptic paroxysms in the EEG were found in 35 (80%). An IQ of 95 or above was found in 32 and an IQ of 94 or below in 19. No difference