

absence of history of seizures and no prior EEG evidence of seizures. Safe concomitant use of anticonvulsants and Ritalin has not been established. In the presence of seizures, the drug should be discontinued." Based on the present study of ten patients and in a retrospective study of 23 patients (McBride MC et al. Ann Neurol 1986; 20:428) there is some support for the use of Ritalin in the hyperactive patient with seizures controlled by anticonvulsant drugs. Phenobarbital is generally a poor choice as an anticonvulsant in children with attention deficit disorder and alternative medications are preferred. Pemoline (Cylert) is generally considered to have less tendency to lower seizure threshold than does methylphenidate. Some recommend that all patients considered for treatment with methylphenidate should first receive an electroencephalogram; those with a history of seizures and/or epileptiform discharges in the electroencephalogram should receive treatment with an anticonvulsant drug such as carbamazepine concomitantly with the CNS stimulant. In a study of the electroencephalogram in 100 consecutive children with attention deficit disorder and hyperactivity, 7% had Grade III dysrhythmias consisting of spike-and-wave, spike or sharp wave abnormalities indicative of seizure activity. (Millichap JG. The Hyperactive Child with Minimal Brain Dysfunction. Chicago, Yearbook Medical Publishers. 1975). The frequency of significant abnormalities in the EEG is sufficient to warrant testing before treatment with methylphenidate.

METHYLPHENIDATE, ACADEMIC PERFORMANCE, AND BEHAVIOR

The effects of 0.3 mg/kg and 1.0 mg/kg of methylphenidate on the overt behavior and academic functioning of 12 children with ADHD are reported from the Department of Psychiatry Research, Hospital For Sick Children, Toronto, Ontario, Canada. A double blind placebo control crossover design was used and each child was tested four times in each drug condition. Methylphenidate enhanced academic functioning by increasing accurate productivity on academic tasks, as well as improving overt behavior. All 12 children were able to complete more work at all levels of the arithmetic task and the letter task without sacrificing accuracy. The majority showed more than a 25% increase in the number of problems completed correctly compared with placebo level performance. The beneficial effects on academic performance did not vary with dosage or task complexity. Behavioral and academic improvements produced by a dose of 0.3 mg/kg in the morning were no longer evident in the afternoon, but a morning dose of 1.0 mg/kg produced behavioral improvements that were clinically and statistically present in the afternoon although academic improvements had disappeared. An increase in pulse and blood pressure was observed one hour following 1.0 mg/kg methylphenidate. (Tannock R et al. Dose-response effects of methylphenidate on academic performance and overt behavior in hyperactive children. Pediatrics October 1989; 84:648-657).

COMMENT. Sprague and Sleanor reported differences in dose effects on learning and social behavior following treatment with

methylphenidate (Science 1977; 198:1274); cognitive performance was maximized at a dosage of 0.3 mg/kg and was impaired by dosages of 1.0 mg/kg or higher. The present study indicated that the larger dosage resulted in a leveling of academic performance and not a decline. The authors admit that the high dose may have enabled the children to sit still and be quiet thereby facilitating their cognitive functioning. In attempting to determine an optimal dose for each child it is essential that the physician notes the dose response and timed course of action on academic, cognitive, and behavioral performance.

RATING SCALES IN ATTENTION DEFICIT DISORDER

A comparison of parent, teacher, and child performance rating scales in the diagnosis and follow-up of methylphenidate treated children with ADDH is reported from Developmental Pediatrics, San Antonio, TX; Department of Pediatrics, Madigan Army Medical Center, Tacoma, WA; and Department of Pediatrics, William Beaumont Army Medical Center, El Paso, TX. The three clinical tools provided varying degrees of supportive data during diagnosis and treatment of 21 children with ADD/H. The ADD-H Comprehensive Teacher Rating Scale classified 67% as having ADD/H and 14% as borderline. The Conners' Parent Rating Scale-Revised identified 71% as having ADD/H. The Gordon Diagnostic System showed 52% as having ADD/H and 29% as borderline. During treatment with methylphenidate, the teacher rating scale showed an increase in attention span and a decrease in hyperactivity, the parent rating scale showed a significant decrease in hyperactive behavior and the Gordon child performance scale showed no significant change. (Cohen ML et al. Parent, Teacher, Child: A trilateral approach to attention deficit disorder. AJDC October 1989; 143:1229-1233).

COMMENT. The teacher and parent rating scales were helpful in monitoring the effects of treatment with methylphenidate while the child performance-dependent test was insensitive to drug effects.

SCHOOL BREAKFAST PROGRAM AND SCHOOL PERFORMANCE

The effects of participation in the school breakfast program by low income children on academic achievement and rates of absence and tardiness are reported from the Department of Pediatrics, Boston City Hospital, Boston, MA. The results in children grades 3-6 in the Lawrence, Mass, public schools were compared with those children who also qualified but did not participate in the breakfast program. Participation in the program had a significant association with improvement in standardized achievement test scores and the rates of absence and tardiness. (Meyers AF et al. School breakfast program and school performance. AJDC Oct 1989; 143:1234-1239).

COMMENT. Further study of this question is indicated, using prospective control designs as well as data regarding protein, fat and carbohydrate content of the meals. Conners has reported beneficial effects on behavior and learning of a sugar load following a protein breakfast whereas adverse effects were noted with sugar alone. (Personal communication).