

since completion of training. The results of the entire group and comparisons among demographic subgroups demonstrated a progressive decline in testing frequency with increasing complexity of mental status function. Higher and related cortical functions were tested significantly less often in children with learning problems than were the more elementary categories of mental status function. The diagnosis ascribed to a child with learning problems appeared to be based on findings other than those provided by the mental status examination. (Brunouell P J et al. Mental status examination of children with learning problems. Pediatric Neurology Jan-Feb 1989; 5:32-36).

COMMENT. Pediatric neurologists are often consulted for the assessment of children with learning disabilities since many childhood learning disorders appear to have a primary neurologic basis. Sensory impairment, epilepsy, or progressive neurologic disease may require exclusion. The use of stimulant medication may need to be justified or its safety determined. The neurologist will use the all important history, the physical and neurological examination, an EEG and sometimes a neuro-imaging test. He will also rely on teacher evaluations and psychological testing by the school or privately. The results of this survey indicate that although the elementary aspects of mental status function (e.g. attention, vigilance, language) are almost always assessed in these children, higher and related cortical functions are relatively ignored or may not be practical in an office setting. However, it is relatively simple to test for Gerstmann syndrome and for defects in the fund of information and calculations. The Draw A Man test and parts of the Stanford-Binet may also be included in a routine pediatric neurology examination. Clinical-neuroanatomic correlations in LD children are not uncommon, particularly when the neurological exam is supplemented with the EEG, evoked potentials, and magnetic resonance imaging. In the future perhaps the mental status examination will play a larger role in the diagnosis of children with learning problems in the child neurologist's office setting.

#### BEHAVIORAL PROBLEMS IN TOURETTE SYNDROME

Behavioral and emotional difficulties in 78 males, 6-16 years of age, with Tourette syndrome were examined at the Departments of Neurology, Pediatrics, Psychiatry, and Education at Johns Hopkins University School of Medicine and School of Continuing Studies, Baltimore, Maryland. Symptoms most often identified included obsessive compulsive behavior, aggressiveness, hyperactivity, immaturity, withdrawal and somatic complaints. Results were divided into two age groups, 6-11 years (21 patients) and 12-16 years (30 patients). Scores were abnormal in 24% of children and 43% of adolescents. In the younger age group, somatic complaints and obsessive compulsive scales were abnormal in 43%, whereas in the older group more than 40% were described as being uncommunicative, obsessive compulsive, aggressive, hyperactive, immature and having hostile withdrawal. Delinquency, aggressiveness and hyperactive behavior were significantly increased in the older age group and abnormal behavioral profiles were more frequent in this age group. Tic severity was not a statistically significant predictor of behavioral disturbance, although a suggestive relationship between tic severity and behavioral disturbance was observed in the 12-16 year old group. Hyperactivity did not demonstrate an increased frequency of additional

behavior problems. The author's emphasize the relative frequency of psychopathology in Tourette syndrome and the need for a comprehensive approach to this syndrome. (Singer H S, Rosenberg L A. Development of behavioral and emotional problems in Tourette syndrome. Pediatr Neuro Jan-Feb 1989; 5:41-44).

COMMENT. The demonstration in this study that there is a relationship between age and psychopathology in Tourette syndrome differs from a previous study which failed to reveal a relationship to age. Behavior and emotional problems were greater in the adolescent. In previous studies, the severity of motor and phonic tics have been claimed to be a predictor of behavioral disturbances in Tourette syndrome. This study corroborates previous reports and the original description by Gilles de la Tourette (1885) describing obsessive compulsive behavior as common in Tourette syndrome. Further studies are required to define the effect of attention deficit disorder with hyperactivity on the development of psychopathology in Tourette syndrome children.

#### BEHAVIORAL EFFECTS OF ANTIPILEPTIC DRUGS

Parental responses to a Child Behavior Checklist were compared before and after changing antiepileptic therapy in an open, parallel design study in the School of Pharmacy and Departments of Neurology and Pediatrics, School of Medicine, University of North Carolina, Chapel Hill, North Carolina. Patients were evaluated just before and again three to four months after starting or stopping phenytoin (PHT), carbamazepine (CBZ), phenobarbital (PB), or primidone (PMD). Patients 4-16 years of age whose antiepileptic regimens were being altered by either adding or discontinuing one of the four drugs were included. Behavior types were in two groups: 1) Externalizing (aggressive and hyperactive), and 2) Internalizing (depressed, withdrawn, schizoid, somatic complaints). Individual T scores were calculated and compared with and without treatment using the two tailed t test for paired data. In the CBZ group (n=6), there were significant improvements in aggression, in the externalizing broad band group and in the T behavior score. Significant changes did not occur in the PHT (n=6) or in the PB/PMD (n=7) groups: externalizing behavior was worse in certain individuals receiving PB or PMD. The Child Behavior Checklist was a sensitive instrument for assessing the behavioral effects of antiepileptic agents in epileptic children. Carbamazepine appeared to have a more consistent beneficial effect on child behavior than phenytoin, phenobarbital, and primidone. (Miles M V et al. Assessment of antiepileptic drug effects on child behavior using the Child Behavior Checklist. J Epilepsy December 1988; 1:209-213).

COMMENT. The Child Behavior Checklist (CBCL) consists of 112 behavior problem items to which a parent responds: very (or often) true, somewhat (or sometimes) true, or not true, as a description of their child. The CBCL has been standardized for both sex and age. The CBCL can be completed by the parents in 15-20 minutes and may be computer scored allowing for rapid individual and group evaluation. This study confirms the value of the CBCL in detecting behavioral changes secondary to antiepileptic therapy in children. All antiepileptic drugs may adversely affect child behavior and cognition but carbamazepine seems to be least likely to increase behavioral problems.