(90% of the US population) and the other, slow or poor metabolizers (10% of population). CYP 2D6 genotype was determined at study entry to determine which patients should receive smaller doses and those who may require higher amounts. The final dose in poor metabolizers was one third that used in extensive metabolizers (0.5 mg/kg/d versus 1.5 mg/kg/d). Although the safety and tolerability of these doses appeared to be similar in the 2 groups, further studies will be needed to define safety in the poor metabolizers. Should determination of the genotype for slow metabolizers be necessary before starting treatment, this would seriously detract from the use of atomoxetine in practice.

CHROMOSOMAL ABNORMALITIES IN ADHD

The prevalence of fragile X syndrome, velocardiofacial syndrome (VCFS), and other cytogenetic abnormalities among 100 children (64 boys) with combined type ADHD and normal intelligence was assessed at the NIMH and Georgetown University Medical Center. One girl with ADHD had a sex chromosome aneuploidy (47,XXX); 1 boy had a premutation-sized allele for fragile X and none showed the full mutation. Testing for 22q11.2 microdeletion characteristic of VCFS was negative for all subjects screened. The results were not different from those expected by chance. Prevalences exceeding 5.5% for chromosomal abnormalities, 3.7% for VCFS, and 3.6% for fragile X full mutations were excluded. In children with ADHD and normal intelligence with no clinical signs and absent family history of chromosome anomalies, testing for cytogenetic abnormalities is not warranted. (Bastain TM, Lewczyk CM, Sharp WS et al. Cytogenetic abnormalities in attention-deficit/hyperactivity disorder. J Am Acad Child Adolesc Psychiatry July 2002;41:806-810). (Reprints: Dr F Xavier Castellanos, NYU Child Study Center, 577 First Ave, New York, NY 10016).

COMMENT. In the absence of clinical indications, including developmental delay, physical signs, or positive family history, testing for chromosomal abnormalities, VCFS, or fragile X is not indicated in children with ADHD of normal intelligence.

Cigarette smoking in adolescents with ADHD. Cigarette smoking was associated with family and peer smoking and with clinically significant ADHD inattention symptoms in a confidential self-report survey of 1066 tenth-grade students in five public high schools conducted at the Lombardi Cancer Center, Washington, DC. ADHD inattentive type is a significant risk factor for cigarette smoking in adolescents. (Tercyak KP et al. J Am Acad Child Adolesc Psychiatry July 2002;41:799-805).

Altered cortical activity in ADHD during attentional load task is demonstrated by quantitative electroencephalography performed with eyes open and during Continuous Performance Task. Increased slow activity over frontal areas and decreased fast cortical activity were observed, indicating a different arousal pattern and possible delay in cortical maturation. (El-Sayed E, et al. J Am Acad Child Adolesc Psychiatry July 2002;41:811-819).

LEARNING DISABILITIES

PATTERN OF LEARNING DISABILITIES IN ELBW CHILDREN

The prevalence and pattern of specific learning disabilities (LD) in neurologically normal children with extremely low birth weight (ELBW) (<800 g)

and average intelligence were compared with full-term children with normal birth weight in a study at the British Columbia Research Institute for Children's and Women's Health, University of British Columbia, Vancouver, BC. Tests included were WISC-R, Gray Oral Reading Test-R, Written Language-R, WRAT-R, and Developmental Test of Visual-Motor Integration. Of 114 children with ELBW born between 1982 and 1987 and seen at ages 8 to 9 years, 74 had IQs greater than or equal to 85 and formed the study group. Thirty full-term children with normal birth weight were the comparison group. Children in the ELBW group scored significantly lower than the comparison group on all measures. Forty-eight in the ELBW group (65%) met criteria for LD in 1 or more areas compared with 4 in the control group (13%), (P<.001). Rates of LD in written output, arithmetic, and reading were significantly higher in the ELBW group. Written output was most frequently affected (83% of children), followed by arithmetic (46%), and reading (35%). Reading achievement was significantly associated with Verbal IQ and short-term visual memory, while arithmetic achievement was significantly associated with Visual-Motor Integration and Verbal IQ. Written output was correlated with Performance IQ. Academic difficulties in children with ELBW reflect a complex mixture of multiple weaknesses in visuospatial, visual-motor, and verbal abilities. (Grunau RE, Whitfield MF, Davis C. Pattern of learning disabilities in children with extremely low birth weight and broadly average intelligence. Arch Pediatr Adolesc Med June 2002;156:615-620). (Reprints: Ruth Eckstein Grunau PhD, Room L408, Centre for Community Health and Health Evaluation Research, 4480 Oak St, Vancouver, BC V6H 3V4, Canada).

COMMENT. Multiple academic weaknesses are common in neurologically normal children with ELBW compared with control peers. Visuospatial, visual-motor, and verbal functioning correlated with performance in arithmetic and reading in ELBW children, while verbal functioning only explained performance of control children.

AUTISTIC SPECTRUM DISORDERS

NEUROPATHOLOGY OF AUTISM

A computerized imaging program was used to measure cell column morphological features in area 9 of the prefrontal cortex and areas 21 and posterior 22 in the temporal lobe of 9 brains of autistic patients and controls, in a study at the Medical College of Georgia, Augusta. Mean age was 12 years for autistic cases and 15 for controls. Specimens were obtained from the Autism Research Foundation, Boston Medical Center, and Armed Forces Institute of Pathology (Yakovlev-Haleem Collection). The number of minicolumns in brains of autistic patients were more numerous, smaller, and less compact in their cellular configuration, with reduced neurophil space in the periphery. (Casanova MF, Buxhoeveden DP, Switala AE, Roy E. Minicolumnar pathology in autism. Neurology 2002;58:428-432). (Reprints: Dr Manuel F Cassanova, Downtown VA Medical Center, 26 Psychiatry Service, 3B-121, Augusta, GA 30911).

COMMENT. This study demonstrating abnormalities in the cell minicolumns of frontal and temporal areas, the basic functional unit for cortical neuronal organization, supports previous reports of structural abnormalities in brains of autistic and childhood-onset schizophrenic patients. (see Progress in Pediatric Neurology III, PNB Publ, 1997;pp239-242). Abnormalities include hypoplasia of cerebellar vermis, smaller cerebral volumes, and lack of hippocampal asymmetry.