in a 24-week trial. Time to exit the study because of seizure recurrence (3 partial, 1 generalized tonic-clonic, or status) or adverse events was longer for patients taking gabapentin in doses of 900 or 1800 mg/day than 300 mg/day. Withdrawal rate was similar for carbamazepine and 1800 mg/day gabapentin (54% versus 57%) but lower for gabapentin 900 mg/day (44%). After day 30, the 900 mg/day group had the highest number of patients remaining in the study. Adverse events were more frequent in carbamazepine-treated patients (84%) than in those receiving gabapentin (60%). Rash occurred with 12% of carbamazepine and only 1% of gabapentin-treated patients. (Chadwick DW, Anhut H, Greiner MJ et al. A double-blind trial of gabapentin monotherapy for newly diagnosed partial seizures. Neurology Nov 1998;51:1282-1288). Reprints: Jeannine Alexander, Parke-Davis Pharmaceutic Research, 2800 Plymouth Rd, Ann Arbor, MI 48105).

COMMENT. Gabapentin in doses of 900 or 1800 mg/day is an effective and relatively safe monotherapy for newly diagnosed partial epilepsy. The low incidence of skin rash and the lack of interaction with other antiepileptic drugs offer advantages over carbamazepine.

METABOLIC DISORDERS

LEUKOTRIENE C4-SYNTHESIS DEFICIENCY

A leukotriene C4-synthesis deficiency, a new inborn error of eicosanoid metabolism characterized by hypotonia, microcephaly, failure to thrive, and retarded development, is described in an infant who died aged 6 months after a rapidly progressive course at the University of Heidelberg, Germany. Concentrations of cysteinyl leukotriene LTC4 and its metabolites could not be detected in the CSF, plasma and urine, and could not be synthesised in stimulated monocytes or platelets, suggesting a deficiency of LTC4 synthase. Defective LTC4 synthesis was the presumed underlying basis for the fatal developmental syndrome. (Mayatepek E, Flock B. Leukotriene C4-synthesis deficiency: a new inborn error of metabolism linked to a fatal developmental syndrome. Lancet Nov 7, 1998;352:1514-1517). (Respond: Dr E Mayatepek, Children's Hospital, University of Heidelberg, Im Neuenhelmer Feld 150, 69120 Germany).

COMMENT. Cysteinyl leukotrienes are lipid mediators derived from arachidonic acid that have effects on vascular permeability, smooth-muscle tone, and mucus secretion. They cause bronchoconstriction, and antileukotriene drugs are now available for treatment of asthma. In addition to their role in allergic and inflammatory disorders, they are synthesized by brain tissue, concentrate in the hypothalamus, choroid plexus and CSF, and act as modulators of central nervous activity. They also affect neuroendocrine function. Leukotriene analysis of CSF should be performed in infants who have progressive neonatal neurologic deficits and consanguineous parents. Morris AAM and Rodger IW provide a helpful commentary on leukotienes and the brain (Lancet Nov 7, 1998;352:1487-1488).

PEROXISOMAL DISORDERS DIAGNOSIS

The clinical manifestations of 27 patients affected with peroxisomal disorders and seen between 1982 and 1997 are described from the Hopital Necker-Enfants Malades, Paris, and other centers. Zellweger syndrome, neonatal adrenoleukodystrophy, or infantile Refsum disease occurred in 20 cases. One had rhizomelic chondrodysplasia punctata, and 1 had classical Refsum disease. The

remaining 5 presented with unusually mild or atypical symptoms, suggesting a peroxisome biogenesis disorder, with variable expression in different tissues. Clinical symptoms vary with age: *neonatal-* hypotonia, seizures, dysmorphisms, and skeletal abnormalities; *1-6 months-* failure to thrive, hepatomegaly, jaudice, retinopathy, cataract; *6 months - 4 years-* neurological presentation, retardation, visual and hearing impairment, osteoporosis; *beyond 4 years-* behavior changes, intellectual deterioration, leukoencephalopathy, peripheral neuropathy. Assay of plasma very long chain fatty acids (VLCFAs) is a general screening test for peroxisomal disorders, but VLCFA elevation may be small in mild variant patients. Diagnostic assays should include plasma phytanic, pristanic, and docosahexaenoic acids; urine organic acids and pipecolic acid; red blood cell plasmalogens; fibroblast plasmalogen synthesis; and liver cytochemical localization of peroxisomal proteins. The diagnostic usefulness of pipecolic acid measured on routine amino acid chromotography is emphasized, especially in atypical cases. (Baumgartner MR, Poll-The BT, Verhoeven NM, et al. Clinical approach to inherited peroxisomal disorders: a series of 27 patients. Ann Neurol Nov 1998;44:720-730). (Respond: Dr JM Saudubray, Department of Pediatrics, Hopital Necker-Enfants Malades, Paris Cedex 15, France).

COMMENT. Peroxisomal disorders may present in a variety of clinical manifestations, often age-dependent. The most common peroxisomal disorder, X-adrenoleukodystrophy (X-ALD), may present with hyperactivity and attention disorders. According to an editorial commentary, the diagnosis of X-ALD should be suspected when ADHD is complicated by dementia, incoordination, or auditory or visual impairment (Moser HW, Raymond GV. Genetic peroxisomal disorders: why, when, and how to test. Ann Neurol Nov 1998;44:713-715). The demonstration of abnormally high levels of VLCFAs in plasma is the prototype initial test. Studies of cultured skin fibroblasts are the most helpful additional test. Other diagnostic assays, including immunochemical assays, are necessary in diagnosis of atypical cases. Diagnosis is important in genetic counseling and disease prevention.

NEUROLEPTIC MALIGNANT SYNDROME AND METHYLPHENIDATE

Neuroleptic malignant syndrome probably caused by methylphenidate (MPH) is reported in a 1-year-old female infant treated at the Institute of Neurological Sciences, Tottori University Faculty of Medicine, Yonago, Japan. Born with hypoxic-ischemic-encephalopathy (HIE) and multicystic encephalomalacia, she was treated with MPH (3 mg/day) at 1 year, 6 months of age, because her circadian rhythm was reversed and irregular. One day after starting MPH, she developed otitis media that resolved with amoxicillin in 5 days. An abrupt onset of fever (39.7*C) after 6 days was associated with muscular rigidity. A CK level of 17,205 IU/L on admission gradually fell to 579 by the 8th day. The HIE, infection, and vegetative state were possible predisposing factors. The pathogenesis and dopaminergic blockade mechanism of the syndrome is discussed. (Ehara H, Maegaki Y, Takeshita K. Neuroleptic malignant syndrome and methylphenidate. Pediatr Neurol Oct 1998;19:299-301). (Respond: Dr Ehara, Department of Pediatrics, Western Shimane Medical Center for the Handicapped, 1926 Watazu-cho, Gontsu 695-0001, Japan).

COMMENT. The three major manifestations of neuroleptic malignant syndrome (NMS) are fever, rigidity, and elevated CK level. Additional characteristic symptoms include tachycardia, tachypnea, altered consciousness, and leukocytosis. Severe brain damage due to HIE and otitis media might be predisposing factors. This is the first reported case of MPH-induced NMS.