

TOXIC DISORDERS

ORGANOPHOSPHATE INSECTICIDE POISONING AND PARKINSONISM

Extrapyramidal parkinsonism in a 14 year-old boy developed 5 days after the accidental ingestion of a raw eggplant sprayed with the organophosphate dimethoate (Rogor), in a report from Meyer Children Hospital, Rappaport School of Medicine, Haifa, Israel. Symptoms began within 36 hours of the poisoning, with confusion, sweating, vomiting, and cardiac arrest. He was mechanically ventilated. Red blood cell cholinesterase was 2.5 units (normal range 11-18), and plasma cholinesterase 1.3 units (normal range 1.5-5). He was treated successfully with obidoxime hydrochloride (Toxogonin) and atropine. Within 4 days of poisoning he became withdrawn and agitated, and his movements were progressively slow, suggesting severe reactive depression, but one day later, marked rigidity, decreased facial expression, and a stooped, slowing gait with agitation established the diagnosis of parkinsonism. Neurologic examination showed a resting tremor, muffled voice, decreased blinking, and cogwheel rigidity. Treatment with amantidine, 100 mg 3 x daily, resulted in rapid clinical improvement within 48 hours and complete recovery after 1 week. Treatment was continued at a reduced dose for 3 months and then weaned with no recurrence of symptoms. A total of 26 similar cases reported in the literature, 1978 – 2004, are reviewed. (Shahar E, Bentur Y, Bar-Joseph G et al. Extrapyramidal parkinsonism complicating acute organophosphate insecticide poisoning. *Pediatr Neurol* November 2005;33:378-382). (Respond: Dr Shahar, Child Neurology Unit, Meyer Children Hospital, Rambam Medical Center, Haifa 31096, Israel).

COMMENT. Of the 27 cases of Parkinsonism with organophosphate insecticide poisoning reported, 21 (77%) recovered. Half recovered spontaneously and the remainder after treatment. Two died from respiratory failure, and 4 had persistent parkinsonism. Early diagnosis and treatment may prevent long-term basal ganglia dysfunction.

PRENATAL NICOTINE EXPOSURE AND FEBRILE SEIZURES

The association between prenatal exposure to cigarette smoke, alcohol, and coffee and the risk of febrile seizures was evaluated by extracting information from records of 2 cohorts of children linked with the Danish National Hospital Register and a follow-up of patients until Dec 1998. A slightly increased risk for febrile seizures was found in children exposed to 10 or more cigarettes daily in one cohort ($p=0.04$), but in the other cohort, this association was weak ($p=0.54$). The cumulative incidence of febrile seizures was 4.4% and 4.0%, respectively, in children exposed in the 2 cohorts, compared to 3.5% and 3.4% in those not exposed. Hazard ratios were 1.25 and 1.09, respectively. No association was found between low to moderate levels of maternal alcohol and coffee consumption and the risk for febrile seizures, either simple or complex in type. (Vestergaard M, Wisborg K, Henriksen TB et al. Prenatal exposure to cigarettes, alcohol, and coffee and the risk for febrile seizures. *Pediatrics* November 2005;116:1089-1094). (Respond: Mogens Vestergaard MD PhD, the

Danish Epidemiology Science Center at the Institute of Public Health, University of Aarhus, 8000 Aarhus, Denmark).

COMMENT. The risk of febrile seizures may be increased in children exposed to moderate nicotine levels in utero. In some previous studies, prenatal smoking was associated with a 2-fold increased risk of febrile seizures, and the risk was increased with the number of cigarettes smoked daily (Berg AT et al. *Epilepsia* 1995;36:334-341).

HEADACHE DISORDERS

ICHD-II CRITERIA IN DIAGNOSIS OF PEDIATRIC MIGRAINE

The sensitivity of the new International Classification of Headache Disorders-2nd edition (ICHD-II) criteria in the diagnosis of childhood migraine was evaluated in 260 patients, ages 18 and under, seen at 2 large pediatric headache centers, and reported from Children's Hospital Medical Center, Cincinnati, OH; The Cleveland Clinic, OH; and other centers. Each headache characteristic in ICHD-II was analyzed individually. ICHD-II criteria were met in 183 (70.4%) of 260 patients. When headache duration was included, the sensitivity was 71.9% for short duration (2 hours) and 73.9% for 1-hour duration headaches. When data were reanalyzed using more relaxed criteria, sensitivity improved to 84.4%. These modified criteria included bilateral headache, duration of 1 to 72 hours, and nausea and/or vomiting plus 2 of 5 other associated symptoms (photophobia, phonophobia, difficulty thinking, lightheadedness, or fatigue), in addition to moderate to severe, throbbing or pulsating pain worsening or limiting physical activity. (Hershey AD, Winner P, Kabbouche MA et al. Use of the ICHD-II criteria in the diagnosis of pediatric migraine. *Headache* Nov 2005;45:1288-1297). (Respond: Dr Andrew D Hershey, Headache Center, Department of Neurology, Children's Hospital Medical Center, 3333 Burnet Ave, MLC 2015, Cincinnati, OH 45229).

COMMENT. Childhood migraine has unique characteristics, including bilateral location, shorter duration, and difficulty with description of headache quality and associated symptoms. Specificity of a migraine diagnosis is required to separate headaches of a secondary type. The separation of tension type headaches (TTH) is debatable, since some regard TTH and migraine as a continuum, from mild to severe. More inclusiveness in diagnosis could lead to a greater sensitivity than the 85% obtained using the ICHD-II criteria, and improvement in treatment and outcome.

In a comparison of ICHD-I-1988 and ICHD-II-2004 criteria in diagnosis of migraine in 496 children studied from 1992-2002, the current (ICHD-II) classification criteria showed greater sensitivity (71% cf 27%) without affecting specificity, but sensitivity was still poor (Lima MMF et al. *Cephalalgia* Nov 2005;25:1042-1047).