

>8 hours. Taste disturbance was the most common adverse event, reported in up to 30% of patients. (Winner P, Rothner AD, Saper J et al. A randomized, double-blind, placebo-controlled study of sumatriptan nasal spray in the treatment of acute migraine in adolescents. Pediatrics November 2000;106:989-997). (Respond: Paul Winner DO, 5205 Greenwood Avenue, Suite 200, West Palm Beach, FL 33407).

COMMENT. Sumatriptan nasal spray may be an effective and well-tolerated treatment of acute migraine in adolescents. In this large multicenter study, the 20 mg dose was most effective, especially in older patients.

**Cognitive functioning during a migraine attack.** A significant loss of cognitive efficiency was demonstrated in 10 adult migraineurs during a migraine attack, in a study at the Headache Care Center, Springfield, MO. (Farmer K et al. A pilot study to measure cognitive efficiency during migraine. Headache Sept 2000;40:657-661). Recovery of cognitive function followed within 15 minutes of sumatriptan injection (6 mg) and continued to improve at 45 minutes. The adverse impact of cognitive effects of migraine on work and study efficiency is an important consideration in a decision to treat aggressively and prophylactically.

## DIVALPROEX SODIUM FOR PREVENTION OF MIGRAINE

The use of divalproex sodium (DVS) as a prophylactic treatment for migraine was studied in 42 patients, 7 to 16 years of age (mean age, 11.3 years) seen between July 1996 and December 1998 at St Jude Children's Research Hospital, Memphis, TN; and Hasbro Children's Hospital/Rhode Island Hospital, Divalproex Brown University, Providence, RI. After 4 months treatment with DVS in doses ranging from 15 to 45 mg/kg.day, 10% became headache-free, 14% had a 75% reduction, 78% a 50% reduction in headaches, and 80% were able to discontinue medicines used to abort attacks. Adverse effects included gastrointestinal upset, weight gain, somnolence, dizziness, and tremor. None had hepatotoxicity. (Caruso JM, Brown WD, Exil G, Gascon GG. The efficacy of divalproex sodium in the prophylactic treatment of children with migraine. Headache Sept 2000;40:672-676). (Respond: Dr Generoso G Gascon, Pediatric Neurology, Hasbro Children's Hospital/Rhode Island Hospital, 110 Lockwood Street, Suite 342, Providence, RI).

COMMENT. In this uncontrolled trial, divalproex sodium was effective as a prophylactic therapy for childhood migraine.

## NEUROIMAGING IN EVALUATION OF MIGRAINE HEADACHE

The utility of neuroimaging in the evaluation of children with migraine and chronic daily headache, with normal neurologic examination, was determined by a retrospective review of 302 patients, aged between 6 and 18 years, seen in the Pediatric Neurology Clinic, Children's Hospital, Eastern Virginia Medical School, Norfolk, 1997-1999. Other types of headache among the patients reviewed included: migrainelike symptoms (10%), chronic daily headache and abnormal neurologic examination (2%), secondary headache (17%), complicated migraine (7%), posttraumatic headache (7%), seizure-related headache (4%), brain tumors (3.6%), tension-type headache (3%), and pseudotumor cerebri (1.3%).

Of 107 (35% of total) with *uncomplicated migraine*, 42 (39%) received CT scans, and 2 (5%) were abnormal (arachnoid cyst in 1 and dilated Virchow-Robin space in 1). Of 12 (11%) who received an MRI, 2 (17%) were abnormal, both having a Chiari type 1 malformation. Of 30 patients with *chronic daily headache*,

17 (57%) received CT scans, and 3 (18%) were abnormal (a maxillary opacification, a mucous retention cyst, and an occult vascular malformation). Of 8 (27%) who had an MRI, 2 (25%) were abnormal, 1 a Chiari type 1 malformation and the other an occult vascular malformation. The yield of neuroimaging (CT and MRI) in children with uncomplicated migraine and chronic daily headache was 4% and 17%, respectively. It was concluded that since none of the abnormalities was associated with headache presentation or necessitated surgical intervention, the neuroimaging was not warranted in these patients. (Lewis DW, Dorbad D. The utility of neuroimaging in the evaluation of children with migraine or chronic daily headache who have normal neurological examinations. Headache Sept 2000;40:629-632). (Respond: Dr Donald W Lewis, Division of Pediatric Neurology, Children's Hospital of the King's Daughters, Eastern Virginia Medical School, Norfolk, VA).

**COMMENT.** In children presenting with uncomplicated migraine and chronic daily headache and having a normal neurologic examination, the yield of neuroimaging studies is 4% and 17%, respectively. In the above retrospective analysis of cases, the types of CT and MRI abnormalities detected were not considered significant in the etiology and management of the headache disorder. It was concluded that neuroimaging is unwarranted in these specific headache syndromes. The occurrence of Chiari 1 malformation in 3 cases cannot be dismissed as a coincidental finding, however, since headache may be the presenting symptom and surgery has occasionally been advocated (Stovner IJ et al. 1992; see Progress in Pediatric Neurology II, 1994;p158). The authors admit that further research is required, to include large prospective studies and the role of repeated neuroimaging in previously negative studies. The importance of neuroimaging in children with headache associated with abnormal neurological or significant physical findings is accepted.

While routine neuroimaging may not be warranted for the pediatrician or family practitioner who has referred the child with recurrent headache for consultation, practice guidelines for the pediatric neurologist must also include the availability of the patient for follow-up. If MRI is deferred, more frequent clinical neurologic evaluations may be necessary to exclude some underlying neurosurgical lesion. Headache, without localizing neurologic abnormalities or signs of increased intracranial pressure, may be an uncommon presenting symptom of brain tumor. The luxury of observation over time is not always available to the neurologist, and the deferral of imaging may not be practical or judicious. (See Progress in Pediatric Neurology III, 1997;p185, for previous studies on brain imaging indications for headaches and commentary).

## TOXIC ENCEPHALOPATHY

### **KERNICTERUS RE-EMERGENCE AND PREVENTION**

Six cases of kernicterus in term and near-term infants, diagnosed in Denmark between 1994 and 1998, are reported from the University Hospital of Aalborg. These reports contrast with a complete absence of cases in Denmark for the previous 20 years. The etiology of the hyperbilirubinemia was spherocytosis, galactosemia, A-O blood type incompatibility in 2, and unknown in 2. The maximum plasma total bilirubin concentrations were 531-745 mcmol/L. Causes listed for the re-emergence of cases of kernicterus include the following: 1) a decreased awareness of signs of kernicterus; 2) premature discharge of infants from the maternity ward; 3) breast-feeding associated jaundice; 4) difficulty in recognition of jaundice in some ethnic patient groups. The following preventive