VISUAL DISORDERS WITH ANTIEPILEPTIC DRUGS

Visual adverse effects induced by antiepileptic drugs (AED) are reviewed by researchers at the Departments of Pediatrics, Universities of Chieti and Bologna, Italy. The majority are reversible and rare. Exceptions include vigabatrin-induced visual field loss that may be irreversible and is frequent (20-40%), and tiagabine-induced blurred vision that is reversible but frequent (41%). The newer AEDs cause visual disturbances more often than the older AEDs. Diplopia and/or nystagmus are the most commonly reported of AED visual disturbances, usually dose-related, and occur rarely with phenytoin, carbamazepine, oxcarbazepine, ethosuximide, felbamate, gabapentin, and lamotrigine (rotary nystagmus). Benzodiazepines may cause blurred vision, retinopathy, glaucoma, and oculomotor imbalance. Topiramate is rarely the cause of a reversible glaucoma, myopia, and ciliochoroidal detachment. Valproate may be associated with impaired visual evoked potentials, visual field defects and deficits in color vision. No adverse visual side effects are reported with levetiracetam. (Verrotti A, Manco R, Matricardi S, Franzoni E, Chiarelli F. Antiepileptic drugs and visual function. **Pediatr Neurol** June 2007;36:353-360). (Respond: Dr Verrotti, Department of Pediatrics, University of Chieti, Ospedale Policlinico, Via dei Vestini 5, 66100 Chieti, Italy. E-mail: averrott@unich.it).

COMMENT. Older AEDs, especially phenytoin and carabamazepine, are known to be a cause of reversible diplopia and nystagmus, but only when drug levels exceed the recommended therapeutic range. Of the newer AEDs, vigabatrin is associated with visual field defects that are often irreversible and related more to the duration of therapy than the dose. The possibility of subtle visual disturbances should be considered in children treated with AEDs, and especially with vigabatrin and other new agents. Ophthalmologic evaluation should be included in clinical trials of new AEDs and in long-term follow-up. The lack of robust evidence-based treatment recommendations for childhood epilepsy is criticized in the current issue of **Lancet Neurology** August 2007;6:663.

HEADACHE DISORDERS

HEADACHE IN SICKLE CELL DISEASE

The prevalence of frequent headache in children with sickle cell disease (SCD) compared to that of control subjects without known sickle cell trait, and the cause of the headaches were studied at the Children's Hospital of Philadelphia, PA, and Duke University Medical Center. Patients and controls were ages 6 to 21 years. Thirty two per cent of 241 children with SCD and 27% of 141 black control subjects reported having headaches at least weekly, a prevalence not significantly different (P=0.27). Mean age of those with frequent headache was 14.2 +/- 4.3 years for SCD patients and 15.9 +/- 3.2 for controls (P=0.03). In children <13 years old, prevalence of frequent headache was 24% for SCD and 9.7% for controls (P=0.013). In both groups, headache was more common with increasing age (P<0.001). Prevalence was similar in various SCD genotypes (SSD-SS, SCD-SC, SCD-SB-thalassemia). Headaches meeting IHS criteria for migraine occurred in 22.1% of patients with SCD and in 21.1% controls. Children with frequent headache were more likely to report