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VIGABATRIN-INDUCED VISUAL IMPAIRMENT

Visual field examination, visual evoked potentials (VEPs), and electroretinography (ERG) were assessed in 24 children (ages 3.5 to 18 years; mean age 13.3 years) who had received vigabatrin as monotherapy (5 children) or adjunctive therapy (19) for epilepsy for more than 6 months (3.0 +/- 1.6 years), in a retrospective study at the Shaare Zedek Medical Center, Jerusalem, Israel. Seizure types were complex partial in 15, generalized tonic-clonic in 5, mixed in 4; and 3 had infantile spasms as babies. Visual field constriction (VFC) was diagnosed in 11 (65%) of 17 patients who could be examined by perimetry. VEPs recorded in 15 were abnormal in 5, and the ERG was abnormal in 4 of 11 patients tested. The majority of children with abnormal VEPs and ERGs also had VFC. Duration of treatment with vigabatrin (but not the dose or age of child) was correlated with abnormalities in visual function. The longer the treatment, the greater the incidence of VFC and abnormal VEPs and ERG ($p < 0.06$). (Gross-Tsur V, Banin E, Shahar E, Shalev RS, Lahat E. Visual impairment in children with epilepsy treated with vigabatrin. *Ann Neurol* July 2000;48:60-64). (Dr Gross-Tsur, Neuropediatric Unit, Shaare Zedek Medical Center, PO Box 3235, Jerusalem 91031, Israel).

COMMENT. Two thirds of children treated with vigabatrin develop visual field constriction, and one third have abnormal ocular electrophysiologic studies. Perimetry is the most sensitive test for vigabatrin toxicity, and VEPs and the ERG can be useful in young or retarded patients not amenable to perimetry evaluation.

Several reports in adults and in children have documented the high frequency of visual field constriction in patients treated with vigabatrin. In many the VFC is mild and asymptomatic, but in some adults it may be sufficiently severe and persistent to limit daily activities. Ophthalmologic examinations should be performed before and at regular intervals in patients treated with vigabatrin. The benefits must be weighed against the risks. For previous references to vigabatrin, see *Ped Neur Briefs* May 2000;14:40 (acute encephalopathy); Aug 1999;13:62 (aminoaciduria, visual field defect); June 1999;13:47 (infantile spasms).

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