

HYPOTHALAMIC HAMARTOMA AND GENERALIZED EPILEPSY

The evolution of symptomatic generalized epilepsy was studied in 12 of 20 children with hypothalamic hamartoma who were treated surgically by transcallosal microsurgical resection at the Royal Children's Hospital, Parkville, Australia. Intraoperative EEGs were recorded from the hamartoma and simultaneously from the scalp and frontal cortex before, during, and after resection in 7 patients. Gelastic seizures in the 12 patients studied began on average at 6 months of age, complex partial and focal motor seizures at 4 years, and tonic seizures at 6 years. Scalp EEGs were normal in one third of patients at first, even after epilepsy was diagnosed. Epileptiform EEG generalized slow spike-wave patterns developed later with tonic seizures. Interictal spike-wave was recorded intraoperatively over scalp and cortex but not from the hamartoma. All 12 had developmental disability and behavioral disorders. The triad of refractory generalized seizures, slow SW in EEG, and neurobehavioral disorder was reversible after resection of the hamartoma. Tonic generalized seizures ceased in 11 of 12 patients, interictal SW activity was markedly reduced, and behavior improved, but the remission of seizures and decrease in SW activity were delayed up to 6 months in some cases. Gelastic seizures arise from the intrinsically epileptogenic hamartoma itself, whereas the interictal spike-wave and generalized seizures have an extralesional origin. The evolution of EEG abnormalities and generalized seizures may reflect a secondary epileptogenesis. (Freeman JL, Harvey AS, Rosenfeld JV et al. Generalized epilepsy in hypothalamic hamartoma. Evolution and postoperative resolution. *Neurology* March (1 of 2) 203;60:762-767). (Reprints: Dr Jeremy L Freeman, Department of Neurology, Royal Children's Hospital, Flemington Road, Parkville VIC 3052, Australia).

COMMENT. Symptomatic generalized epilepsy and neurobehavioral disorders often complicate and follow the onset of gelastic seizures in children with hypothalamic hamartoma. The generalized seizures, associated slow spike-wave EEG, and behavior problems are usually reversible following resection of the hamartoma. Since antiepileptic drugs are largely ineffective, early diagnosis and operation before the development of generalized seizures and behavioral deterioration should be considered. It is noteworthy that one report, cited by the authors, has attributed the symptomatic generalized seizures to either widespread occult cerebral dysgenesis or irreversible cerebral damage (Sisodiya SM et al. *Epilepsia* 1997;38:1008-1010). The present study emphasizes the functional nature and reversibility of generalized seizures complicating hypothalamic hamartoma.

POKEMON PHENOMENON AND SEIZURES

A survey by questionnaire of 67 Japanese children affected by watching the animated television series Pocket Monsters (Pokemon) on December 16, 1997 and their parents was compared with that of children not affected by the program, in a study conducted at Showa University School of Medicine, Tokyo, Japan, and other centers. Children who visited 14 pediatric clinics for other reasons within 2 months after the incident were included. Of 1,373 replies, 800 were male and 558 female (15 unspecified), and mean age was 6.8 +/- 3.5 years. The majority (80%) had watched the program, and 67 (6.1%; 40 males, 27 females) were affected. Ten had photosensitive seizures (0.9%; 4

males and 6 females; mean age 10.8 years) and 57 developed other symptoms: a) during or immediately after, or b) at least 30 minutes after viewing the TV program. Older children tended to develop symptoms, including seizures, more frequently than younger children. Symptoms in Group a) included headache, nausea, vomiting, blurred vision or vertigo (28 children [2.6%]), and delayed-onset symptoms in Group b) were similar or minor, resembling motion sickness (29[2.7% of viewers]). Individual or family history of seizures was obtained in 80% patients with seizures, compared to only 29% of patients with other symptoms and 27% with minor delayed-onset symptoms ($p<0.001$). Compared with nonaffected children, significantly more affected children had concentrated on watching the TV program, watched it at a short distance from the screen, and in a dimly lit room. (Furusho J, Suzuki M, Tazaki I et al. A comparison survey of seizures and other symptoms of Pokemon phenomenon. Pediatr Neurol Nov 2002;27:350-355). (Respond: Dr Furusho, Department of Pediatrics, Showa University School of Medicine, 1-5-8 Hatanodai Shinagawaku, Tokyo, 142-8666, Japan).

COMMENT. Pokemon phenomenon was a significant social problem in Japan and resulted in many studies regarding the adverse effects of cathode ray tube images and TV viewing, conditions facilitating induction of photosensitive seizures, and other symptoms. Children with seizures had a heightened predisposition, and viewing conditions had not been optimal. Guidelines for TV viewers cautioned against sitting close to the screen and in a dark room. Blue sunglasses were recommended for viewers susceptible to photosensitive epilepsy. Symptoms occurring other than seizures included headache and dizziness, resembling motion sickness. See Progress in Pediatric Neurology III, PNB Publishers, 1997;pp 64-67, for articles on visually induced seizures, including video-game epilepsy, self-induced photogenic epilepsy, and reading epilepsy.

ANTIEPILEPTIC DRUG-INDUCED FETAL MALFORMATIONS

Women with epilepsy attending a single maternity clinic, Helsinki University Central Hospital, Finland, were followed prospectively during 970 pregnancies in 1980 through 1998. Of the 979 offspring, 740 were exposed to maternal antiepileptic drugs (AED) during the first trimester of pregnancy and 239 were not exposed. Major malformations occurred in 28 fetuses (3.8%) exposed to AED and in 2 (0.8%) not exposed ($p=0.02$). The occurrence of major malformations was independently associated with the use of carbamazepine ($p=0.05$), valproate ($p=0.003$), oxycarbamazepine ($p=0.04$), low serum folate concentration (<4.4 nmol/L), and low maternal level of education. AED levels and serum folate were obtained at the end of the first trimester. No correlation was observed between dose or serum concentration of AED and malformations. The risk of malformations increased as the number of AED used increased. Grand mal seizures during the first trimester were not a factor in the cause of major fetal malformations. Alcohol intake, smoking, and exposure to phenytoin, clonazepam, phenobarbital, or primidone showed no significant association with fetal malformations. (Kaaja E, Kaaja R, Hiilesmaa V. Major malformations in offspring of women with epilepsy. Neurology February (2 of 2) 2003;60:575-579). (Reprints: Dr Vilho Hiilesmaa, Department of Obstetrics and Gynecology, Helsinki University Central Hospital, PO Box 140, 00029 HUCH, Finland).