

SEIZURE-ALERTING DOGS IN EPILEPSY MANAGEMENT

Families of all children (1 to 18 years old) followed at the Refractory Epilepsy Clinic, Alberta Children's Hospital, Canada, were surveyed and those who had a dog for at least one year while having at least 1 seizure/month were selected and questioned regarding seizure-related behaviors. Forty-eight families (39%) owned a dog, and twenty families (42%) reported specific seizure-related behaviors by their dog during or immediately after the child's seizure. Most seizure-response dogs (SRDs) (68%) were larger animals (>40 lbs), mostly mixed breeds. Response behaviors included licking of the face, decreased motor activity, and whimpering, usually during or after the event. Anticipatory behavior, preceding the seizure by 2.5 minutes (range, 10 sec to 5 hours), occurred in 41% of the SRDs (approximately 15% of all dogs studied). The seizure-alerting dogs (SADs) were mainly female (80%), larger animals, including Golden Retriever, Standard Poodle, and German Shepherd. The alerting behaviors were thought to represent a unique sensory ability; they usually existed with the first seizure, were seizure type and child specific, had a median sensitivity estimate of 80%, and they never occurred without a subsequent seizure. They were protective in nature (eg the dog would sit on a toddler prior to an expected drop attack), and no instance of aggression was reported. Quality of life was higher in families with a dog, and particularly if the dog was seizure-responsive. (Kirtan A, Wirrell E, Zhang J, Hamiwka L. Seizure-alerting and -response behaviors in dogs living with epileptic children. *Neurology* June (2 of 2) 2004;62:2303-2305). (Reprints: Dr A Kirtan, Division of Pediatric Neurology, Department of Pediatrics, Alberta Children's Hospital, 1820 Richard Rd SW, Calgary, AB T2T 5C7, Canada).

COMMENT. Perhaps the earliest examples of the therapeutic value and protective instinct of dogs are recorded in Elizabethan times, when the Cavalier King Charles Spaniel, often depicted in royal portraiture, is named 'Comforter' and is credited with "strange healing powers" (1570) by Dr Johannes Caius, physician to the Queen. The dog is found under the skirts of Mary Queen of Scots at her beheading in 1563, at the feet of Charles I when beheaded in 1649, and the constant companion of Charles II, 1660-85 (Forword M. The Cavalier King Charles Spaniel. London, Hutchinson, 1980). The Cavalier King Charles Spaniel should be added to the list of breeds likely to have anticipatory seizure-responsive behavior in future efforts to validate these canine instincts.

FAMILIAL EPISODIC AMAUROSIS

A family with a stereotyped unilateral or bilateral transient visual loss, that recurred many times daily and was associated with childhood epilepsy and familial hemiplegic migraine, is reported from University Hospitals, Geneva, Switzerland. The index case was a 43-year-old man who had 3 to 10 daily episodes since infancy, commonly provoked by sudden changes of light intensity or by pressure on the eyelids, and followed by a 30 sec refractory period when amaurosis could not be reprovoked. Illumination of the affected eye in unilateral amaurosis failed to induce pupillary responses, whereas the response to illumination of the unaffected eye was normal, with both direct and consensual pupillary constriction. Between episodes, pupillary responses and the neurologic exam, including MRI

and angiography, were normal. The patient also developed familial hemiplegic migraine and partial epilepsy with secondary generalization in adolescence. No relation was observed between the episodic amaurosis, the migraine or seizures. Only the seizures were responsive to AEDs. Relatives affected by the episodic amaurosis, named “elicited repetitive daily blindness (ERDB),” included a cousin, and two daughters, all affected also by familial hemiplegic migraine and partial seizures in two. Genetic linkage to CACNA1A was excluded, and inheritance is segregated as monogenic, autosomal dominant with variable expression. (Le Fort D, Safran AB, Picard F, et al. Elicited repetitive daily blindness. A new familial disorder related to migraine and epilepsy. **Neurology** July (2 of 2) 2004;63:348-350). (Reprints: Dr Dominique Le Fort, Neurology Practice, 7 ruelle du Couchant, 1207 Geneva, Switzerland).

COMMENT. This benign familial syndrome of episodic repetitive daily blindness (ERDB), beginning in childhood and later associated with familial hemiplegic migraine and epilepsy, appears to be localized to an intermittent defect in the eye that is non-progressive but repetitive in to adult life. Ischemic causes, usually invoked in amaurosis fugax, are possible in ERDB but are considered unlikely because of the rapid reversibility and benign course.

HEADACHE DISORDERS

MENSTRUAL MIGRAINE

The association between migraine and menstruation was determined using diary data from 155 women of median age 44 years (range, 15 to 58 years) who were not using hormonal contraception and attended the City of London Migraine Clinic, UK. Within-woman analysis and comparing menstruation days with all other times of 693 cycles showed that migraine was 1.7 times more likely to occur during 2 days before menstruation and 2.1 times more likely to be severe, and 2.5 times more likely to occur in the first 3 days of menstruation when it was 3.4 times more likely to be severe. The chance of migraine attacks was 25% more likely in the 5 days preceding menstruation (relative risk (rr) 1.25) and increased to 71% in the 2 days pre-menstruation (rr 1.71). The risk was highest on the first day of menstruation and the following 2 days (rr 2.50), and the risk of severe migraine with vomiting was 5 times more likely on those days (rr 4.69). (MacGregor EA, Hackshaw A. Prevalence of migraine on each day of the natural menstrual cycle. **Neurology** July (2 of 2) 2004;63:351-353). (Reprints: Dr EA MacGregor, City of London Migraine Clinic, 22 Charterhouse Square, London EC1M 6DX, UK).

COMMENT. Migraine at menstruation is different from nonmenstrual migraine and attacks are more frequent and severe, even within individuals.

Headache among adolescent girls in the US was studied at the National Institutes of Health, Bethesda, using a school-based national survey, 1997-98. Headache is a prevalent complaint, occurring in 29.1% of girls in grades 6 through 10, and somatic complaints are frequently associated (stomachache in 20.7%, back pain in 23.6%, and morning fatigue in 30.6%). Heavy alcohol consumption, high caffeine intake, and cigarette smoking daily were