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Texas Agricultural Extension Service

Canine Epilepsy



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Epilepsy is a disorder characterized by recurrent seizures. Seizures, also known as fits or convulsions, occur when an area of nerve cells in the brain becomes overexcitable. This area is often called a seizure focus. The mechanism responsible for development of a seizure focus is unknown.

There are two general categories of canine epilepsy: inherited and acquired. Inherited epilepsy affects about 1 percent of the canine population. Breeds which may inherit epilepsy include the beagle, Belgian shepherd, German shepherd, dachshund and keeshond. A genetic factor is suspected in other frequently affected breeds such as the cocker spaniel, collie, golden retriever, Labrador retriever, Irish setter, miniature schnauzer, poodle, Saint Bernard, Siberian husky and wire-haired fox terrier.

Acquired epilepsy may occur months to years after an injury or illness that causes brain damage. In many cases, the dog is completely normal except for occasional seizures. Causes of acquired epilepsy include trauma, infection, poisons, hypoxia (lack of oxygen) and low blood sugar concentration.

The pet owner plays an important role in helping the veterinarian to diagnose epilepsy, especially in distinguishing between inherited and acquired epilepsy. In taking the pet's history, the veterinarian may ask questions about the type of seizures, how frequently they occur, and also the age of the pet when the first seizure occurred. The first seizure of inherited epilepsy usually occurs between the ages of 1 and 3 years. Seizures that occur before 6 months or after 5 years of age are probably the result of acquired epilepsy, although acquired epilepsy may begin at any age.

Inherited epilepsy is characterized by generalized seizures that affect the dog's entire brain and body. The dog usually falls on its side and displays paddling motions with all 4 limbs. There is usually loss of consciousness; the dog is not aware of its surroundings and will not respond when its name is called. There may be excessive drooling, and the dog may urinate or pass

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feces during or after the seizure. The seizure usually lasts no longer than 1 to 2 minutes, although the dog may act abnormal before and after the seizure.

Acquired epilepsy is characterized by partial seizures. A partial seizure affects only one part of the body and the dog does not lose consciousness. Signs that may be observed during a partial seizure include turning of the head to one side, muscular contractions of one or both legs on the same side and bending of the body to one side. These are called localizing signs because they help to determine the location of the seizure focus in the brain. The localizing sign may occur only briefly, after which the seizure becomes generalized. When this occurs it may be difficult to distinguish between acquired and inherited epilepsy. Therefore, it is very helpful if the owner observes the entire seizure and watches for localizing signs.

Epilepsy is treated by giving anticonvulsant medication orally several times a day. This is effective in 60 to 70 percent of epileptic dogs. Unfortunately, complete elimination of seizures usually is not possible. Instead, reducing the frequency, severity and duration of the seizures is the goal of anticonvulsant therapy. The owner usually makes the final decision about when to begin anticonvulsant therapy. Each owner may have different reasons for wanting to begin treatment early or for waiting a while. It is generally recommended that anticonvulsant medication be given when seizures occur more often than once every 6 weeks, or when severe clusters of seizures occur more often than once every 2 months.

The single most important factor in the success of treatment is the willingness of the owner to consistently give the medication as directed. Each dog responds differently and must be treated as an individual. Adjustments in drug dosage and the frequency of drug administration are sometimes necessary. The veterinarian may need to obtain blood samples from the dog in order to measure the concentration of drug in the bloodstream. This may need to be done several times during the dog's life, especially when the frequency or severity of seizures increases.

Anticonvulsant medications should never be discontinued suddenly because status epilepticus could occur, resulting in death. Status epilepticus is a series of seizures with no periods of consciousness in between. This is a medical emergency and the pet owner should seek veterinary care immediately.

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