Seizures in Older Dogs

Robert L. Bergman DVM, MS, Dip ACVIM
Carolina Veterinary Specialists

Older dogs (7 years or older) that experience their first seizure are unlikely to have primary or genetic epilepsy. However, the occurrence of a seizure does not necessarily indicate a progressive and life threatening disease such as a brain tumor. In a recent retrospective study, 21% of dogs over 7 years were identified as having cryptogenic epilepsy following extensive diagnostic testing. In these dogs no abnormalities were found on diagnostic evaluation including MRI and cerebrospinal fluid analysis. In another recent retrospective study, 35 of 99 dogs (35%) over 5 years of age were diagnosed with idiopathic epilepsy. Other possible causes for seizures include neoplasia (primary or secondary), vascular disease (infarction), inflammatory diseases, infectious disease, or metabolic conditions. Certainly structural brain disease should be considered in dogs with a recent onset of seizures. A seizure often times is the first indicator of a brain tumor. Tumors are most common in the cerebrum and seizures are the most common sign. While most dogs with brain tumors are over 5 years of age (95%), the median age is 9 years. The most common type of tumor is menigioma. It is been found that Golden retrievers have a high incidence of brain tumors.

Tumors are a topic with clients when discussing the recent onset of seizures in the older dog. Many times the client indicates that they would have no intention of seeking definitive treatment for their pet if a brain tumor is found. However, one indication to identify the underlying problem is to help rule out the presence of a tumor, which significantly changes the long term prognosis for the animal, as well as effort put into seizure control. Also, in a recent report, dogs with tumors in the supratentorial region had a median survival time of 178 days, indicating palliative treatment alone can substantially improve survival time. In this population of dogs, 73% had seizures as a clinical sign. Seizures in the frontal lobe are reported to be the most frequent location for tumors that result in seizures. Lack of neurological deficits or abnormalities has been shown to be a poor predictor of identifying a structural cause for epilepsy in dogs over five. Therefore MRI and cerebrospinal fluid analysis are recommended.

In dogs for which no abnormalities were found on a diagnostic evaluation, good seizure control was attained in 84% with treatment. However, in the same study, 79% of dog over 7 years of age had symptomatic epilepsy, which emphasizes the need for diagnostic testing in an older dog with a recent onset of seizures.

Anticonvulsant choices are based on consideration of the individual case. Phenobarbital may be a reasonable choice, however, if a brain tumor is suspected the combination this drug with prednisone can result in significant polyphagia. Therefore, zonisamide might be a better initial drug. Also, certain types of seizures will respond to specific anticonvulsants. The author finds that levetiracetam (LEV) is helpful in dogs having partial seizures. Levetiracetam tends to have
minimal side effects. It should be noted that concurrent administration of phenobarbital with LEV results tend to result in a lower serum LEV concentration, thus making an increased dose of LEV necessary.

**Suggested Reading:**


