

## **Assessment of the prevalence and clinical features of cryptogenic epilepsy in dogs: 45 cases (2003-2011)**

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Older dogs with repeated seizures are diagnosed with cryptogenic epilepsy when an underlying cause for their seizures is suspected, but is not identified through diagnostic testing. The objective of this study was to determine the prevalence and clinical features of cryptogenic epilepsy among dogs. The medical records from 214 dogs with an onset of seizures at  $\geq 7$  years of age and that underwent magnetic resonance imaging of their brain were reviewed; this included dogs with cryptogenic epilepsy as well as dogs for which an underlying cause for the seizures was identified (symptomatic epilepsy). Age, breed, gender, seizure history, and results of diagnostic testing were recorded. Owners were contacted and asked to complete a questionnaire regarding frequency of seizures, what medications were prescribed to treat the seizures, their perception of quality of life, if the dog was still alive or had died, and if the dog had died, the date and cause if known. Variables were compared between dogs grouped according to diagnosis (cryptogenic epilepsy, symptomatic epilepsy) and age.

Forty five (21%) dogs had a diagnosis of cryptogenic epilepsy and 169 (79%) had symptomatic epilepsy. 29% of the dogs that were 7-9 years old at the onset of seizures had a diagnosis of cryptogenic epilepsy. This value decreased to 13% in dogs that were  $\geq 10$  years of age at the onset of seizures. Most dogs with cryptogenic epilepsy were receiving at least one medication to treat their seizures, and dogs typically had one or fewer seizures a month following their hospital visit when the diagnostics were performed. Twenty dogs (44%) with cryptogenic epilepsy had died at the time of the study, and their death was related to seizures or seizure medications in 7 of these dogs. The average survival time from onset of seizures for dogs with cryptogenic epilepsy was 52 months. Average quality of life score (scale, 1 [poor] to 10 [excellent]) was 10 before diagnosis of cryptogenic epilepsy and initiation of treatment for seizures, and 8 afterwards.

In this study, cryptogenic epilepsy was diagnosed in a substantial proportion of dogs with an onset of epileptic seizures at  $\geq 7$  years of age. This indicates that dogs that begin to have seizures at an older age do not necessarily have an underlying cause that will be identified through diagnostic testing. Seizure control was considered to be acceptable in most dogs. The average age at the time of death was  $> 12$  years, which suggests that no dramatic shortening of life should be expected for most dogs with cryptogenic epilepsy.