

Classifying Paroxysmal Dyskinesias

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In the Literature

Lowrie M, Garosi L. Classification of involuntary movements in dogs: paroxysmal dyskinesias. *Vet J.* 2017;220:65-71.

FROM THE PAGE ...

Dyskinesias often mimic seizures—and vice versa—and can be difficult to distinguish in veterinary patients. There are several classifications of paroxysmal dyskinesias (PDs) in humans; most canine PDs share more characteristics with human paroxysmal nonkinesigenic dyskinesias, which occur spontaneously at rest. This article reviewed PDs in human and veterinary medicine and proposed a classification system for veterinary patients.

The abnormal movements of paroxysmal movement disorders typically are self-limiting and painless and lack autonomic signs and a postictal phase; the patient usually remains conscious. Episodes may vary in length and can start and stop abruptly. Neurologic examination is often normal between episodes.

Diagnosis is made by observing the episode in person or on video. Motor activity, mentation, length of episode, post-ictal behavior, and any autonomic signs are noted. Genetic mutations have been identified for 2 veterinary PDs: a mutation in the brevicane gene (*BCAN*) in episodic falling syndrome in Cavalier King Charles spaniels and a mutation in the *PIGN* gene in soft-coated wheaten terriers.^{1,2}

Clinical signs in Cavalier King Charles spaniels include deer-stalking episodes, which are often triggered by stress or excitement (age of onset, 14 weeks to 4 years).

Dietary causes include gluten-sensitive PDs in border terriers (age of onset, 6 weeks to 7 years).³ Clinical signs include episodes of difficulty walking, tremors, and dystonia that can last minutes to hours. Some border terriers may show improvement with a gluten-free diet. Secondary causes of PDs in all dogs include drug-induced PDs associated with phenobarbital and propofol or structural intracranial disease.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** Clinical signs supporting PD diagnosis include movement of one or more limbs, retained consciousness, no progression to generalized seizures, episodes lasting much longer than seizures (can be hours), lack of a post-ictal phase (even after lengthy episode), and improvement over time. Frequency of movements with PDs is usually markedly less than is seen with generalized seizures.
- 2** PDs have been reported in many breeds. Diagnosis in dogs is typically based on observation, clinical signs, and history. Advanced diagnostic testing (eg, MRI) is useful when considering a primary dyskinesia versus secondary dyskinesia with a structural cause.
- 3** Some breed-specific PDs can be benign and self-limiting. Rare successful treatments have been reported using clonazepam, acetazolamide, fluoxetine, and phenobarbital.^{1,4,5} Precipitating events such as stress should be avoided.

References

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