



Koen M. Santifort MSc, DVM

Veterinair Verwijscentrum  
'de Pietersberg',  
Pietersbergseweg 14  
6826 BV Oosterbeek  
The Netherlands

koensantifort@gmail.com

## EPILEPSY-MISDIAGNOSIS: PAROXYSMAL NON-KINESIGENIC DYSKINESIA IN A CROSSBRED DOG

### Introduction

Paroxysmal movement disorders or dyskinesias are important differential diagnoses for (suspected) epilepsy / epileptic seizure activity. They are recognized with increasing frequency in veterinary patients <sup>(1,2,3)</sup>. They are characterized by episodic, involuntary, abnormal movements and postures without loss of consciousness, interspersed by long periods of normality <sup>(1)</sup>.

### Case

A nine year-old female neutered crossbred dog was presented with episodic seizures since the age of 6 months, which were unsatisfactorily controlled with phenobarbital administration (the dog had been presumptively diagnosed with epilepsy in the past). Upon further consultation and examination there was considerable doubt as to whether or not the seizures were epileptic in nature. One major argument against epileptic seizure activity was that the dog was (seemingly) fully conscious during these 'attacks'. A video of an episode was made showing mainly dystonia and no signs of impaired consciousness.

### Results and follow-up

General physical examination revealed no abnormalities. A full neurological examination was performed and no abnormalities were found. Some bloodwork was performed and the most significant finding was that non-fasted bile acids were significantly elevated (63  $\mu\text{mol/L}$ ). Ultrasonographic examination of the abdomen, including the liver, showed no clear abnormalities.

### Conclusions

A paroxysmal non-kinesigenic movement disorder characterized by dystonia was considered the most likely diagnosis. Several paroxysmal dyskinesias have been described in veterinary literature <sup>(1)</sup>. This case illustrates that paroxysmal dyskinesias should be routinely incorporated into the diagnostic workup of every patient (also non-purebred dogs) presenting with 'seizure(-like) activity' and that videos are indispensable

in the diagnostic process. Classification recommendations pertaining to paroxysmal dyskinesias in veterinary patients have recently been suggested and are work in progress <sup>(1)</sup>.

### References

1. Lowrie M, Garosi L. Classification of involuntary movements in dogs: Paroxysmal dyskinesias. *The Veterinary Journal* 2017;220:65–71
2. Richter A, Hamann M, Wissel J, Volk H. Dystonia and Paroxysmal Dyskinesias: Under-Recognized Movement Disorders in Domestic Animals? A Comparison with Human Dystonia/Paroxysmal Dyskinesias. *Frontiers in veterinary science* 2015;2(65):1-14
3. Urkasemsin G, Olby N. Canine paroxysmal movement disorders. *Veterinary Clinics of North America: Small Animal Practice* 2014;44(6):1091-1102.

### VIDEO COULD BE SHOWN AT PRESENTATION

(DEPENDING ON FORM OF PRESENTATION – LIVE versus POSTER)