

VETERINARY TECHNICAL DATASHEET

Bandera's Neonatal Ataxia, (BNAt)



Mutation Found In :Coton de Tulear

Disorder Type

- Nervous system

Disease Severity

- Moderate/severe

Background

Inherited ataxias (i.e. cerebellar ataxias) are a heterogenic group of disorders. The onset of disease and progression depend on the type of ataxia in question. Clinical signs may occur in young puppies, juveniles, or in dogs a few years of age. Neonatal (i.e. newborn) cerebellar ataxia is an early onset, severe neurological disease. Affected puppies show signs such as difficulties in movement starting at 2 weeks of age. This disease was identified in the Coton de Tulear breed. There is another type of cerebellar ataxia found in the Coton de Tulear breed, but it is associated with a later onset. The mode of inheritance of neonatal cerebellar ataxia is autosomal recessive.

Key Signs

- Problems standing and walking
- Head nodding
- Intention tremors

Clinical Description

First signs are observed as soon as the puppies start to move at around 2 weeks of age. Usually, affected puppies are unable to stand or walk on their own and they appear to move as if they were swimming. Other signs are nodding of the head, intention tremors, and jerky movements of the eyes. Clinical signs do not usually progress, but due to their severity affected puppies are usually euthanized.

Mode of Inheritance

- autosomal recessive

Gene Name

- GRM1

Next Steps

For affected dogs clinical sign progression should be carefully monitored, ensuring the dog is as comfortable as possible. Affected dogs are usually euthanized on welfare grounds, although some dogs may live longer with significant support.

References

Zeng R, Farias FHG, Johnson GS, McKay SD, Schnabel RD, Decker JE, Taylor JF, Mann CS, Katz ML, Johnson GC, Coates JR, O'Brien DP. A Truncated Retrotransposon Disrupts the GRM1 Coding Sequence in Coton de Tulear Dogs with Bandera's Neonatal Ataxia. J Vet Intern Med 25:267-272, 2011.

Coates JR, O'Brien DP, Kline KL, Storts RW, Johnson GC, Shelton GD, Patterson EE, Abbott LC. Neonatal cerebellar ataxia in Coton de Tulear dogs. J Vet Intern Med 2002;16:680-689.