Neo-Natal Ataxia

Description

Neonatal ataxia is a neurological symptom consisting of a lack of normal coordination of movements. In case of neonatal ataxia the lack of normal coordination becomes evident around 3-4 weeks of age as puppies are starting to lift their heads and becomes more evident when they are starting to walk.

Neonatal ataxia was (BNAt – Bandera´s neonatal ataxia) originally called Bandera´s syndrome after the first puppy of Coton de Tulear breed affected, in which the clinical signs of this disease were described.

Symptoms

All affected puppies show similar signs. The affected puppies nurse well and grow adequately, but have difficulties from the time they become active. The affected pups are unable to stand and walk. Despite all their efforts, they move uncoordinatedly all four limbs and these movements are often compared with "swimmer" movements. When attempting to move, they will frequently push themselves forward, but fall immediately to one side or the other in an attempt to get up. After they fall, they often continue to paddle by their limbs.

Another common sign is a tremor or bobbing of the head that are most dramatic when the pup is trying hardest to hold the head steady, for example, when the pup is trying to eat or sniff an object and is referred to as an intention tremor. There may also be a tremor or jerking of the eyes.

Carriers of the defective gene that are not affected look and behave normal. There will be no symptoms to indicate that they carry the DNA. The only way to determine this is through DNA testing. The only time it would become a problem is the potential of their offspring being affected with the disease if they are bred to another carrier.

Treatment

There is no treatment for dogs with Neonatal Ataxia. Affected animals who cannot function are euthanized.

Test method

Neonatal Ataxia testing is through DNA using a blood sample or cheek swab.

Testing application via the University of Missouri, USA:

http://www.caninegeneticdiseases.net/DNAtests/Cotontst.pdf

Testing via VetGen:

http://www.vetgen.com/ordertests.aspx?id=Coton de Tulear

Stats within CdT breed

About 10% of Coton de Tulear in Europe are carriers of the mutation responsible of neonatal

ataxia. The OFA has record of 65 Cotons tested for BNAt from 1974 – 2012 of which 96.9% are normal.

Genetic/breeder Information

Test results may be clear, carrier, or affected for Bandera's. A breeder who knows the genetic status of the dog scan select its breeding dogs, adapt matings, avoid the birth of affected puppies and limit the spread of this neurological disease in the breed.

Neonatal ataxia in Coton de Tulear is inherited as an autosomal recessive trait. That means the disease affects dogs with P/P (positive / positive) genotype only. The dogs with P/N (positive /negative) genotype are clinically without any symptom. They are genetically considered carriers of the disease (heterozygotes). In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 25 % P/P (affected), and 50 % N/P (healthy carriers).

Because of high risk of producing affected offspring, mating of two N/P animals (carriers) cannot be recommended.

A dog that is a carrier of the mutation will not develop the disease but transmits it to 50% of the puppies. The result of breeding carriers of the mutation is spreading the disease through the breed increasing the frequency of the mutation and the number of affected dogs.

Further info, links

http://www.banderassyndrome.com

Source of data

http://www.genomia.cz/en/test/125/

http://www.antagene.com/sites/default/files/neonatal_ataxia_-_coton_de_tulear_.pdf