Canine Multi-focal Retinopathy type 2 (CMR2)

Description

Canine multifocal retinopathy (CMR) is a hereditary disease. It is a retinal disorder caused by mutation in VMD2 gene (Vitelliform Macular Dystrophy 2 Gene). VMD2 gene is coding a protein bestrophin which is responsible for right forming of pigment epithelium in retina. Mutations in VMAD2 gene cause pigment epithelium atrophy which is leading to serious damage of sight.

CMR disease usually arises before 4th month of age in an affected puppy. Clinically, rose-grey coloured lesions are remarkable in retina. These lesions are of different size and shape and are occurred in both eyes of affected individual. Total blindness usually comes in higher age.

Symptoms

The mutation causes raised lesions to form on the retina which alters the appearance of the eye but usually does not affect sight. The lesions may disappear, or may result in minor retinal folding. Symptoms of the mutation usually appear when a puppy is only a few months old, and generally do not worsen over time.

Treatment

There is currently no known treatment for animals with CMR.

Test method

Testing is through DNA using a blood sample or cheek swab.

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

Genetic/breeder information

Test results will indicate that an animal is clear, carrier, or affected. CMR is recessive, so both parents would need to be carriers of the mutation to produce an affected puppy. “Clear” CMR dogs do not carry the mutation for the disorder. Breeding two clears or one clear and one carrier will not produce affected offspring, however if one parent is a carrier, a percentage of the offspring will be carriers. Therefore, it is useful to test for the presence of the CMR mutation before breeding. Additionally, since retinal defects can be caused by other conditions, testing can verify that a dog actually has CMR rather than some other eye condition.

Source of data

http://www.genomia.cz/en/test/63/

http://animalgenetics.eu/Canine/Canine-disease/canine-CMR1.html