



Always consult with a veterinarian that you feel comfortable with before diagnosing or treating any disease on your own. This information is for reference only.

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Retinal Dysplasia

Issue Description

An eye disease affecting the retina of animals and, less commonly, humans. It is usually a nonprogressive disease and can be caused by viral infections, drugs, vitamin A deficiency, or genetic defects. Retinal dysplasia is characterized by folds or rosettes (round clumps) of the retinal tissue.

Other Names

RD

Causes

Most cases of retinal dysplasia in dogs are hereditary. It can involve one or both retinas. Retinal dysplasia can be focal, multifocal, geographic, or accompanied by retinal detachment. Focal and multifocal retinal dysplasia appears as streaks and dots in the central retina. Geographic retinal dysplasia appears as an irregular or horseshoe-shaped area of mixed hyper or hyporefectivity in the central retina. Retinal detachment occurs with complete retinal dysplasia, and is accompanied by blindness in that eye. Cataracts or glaucoma can also occur secondary to retinal dysplasia. Other causes of retinal dysplasia in dogs include infection with canine adenovirus or canine herpesvirus, or radiation of the eye in newborns.

Commonly Affected Breeds

- Bedlington Terrier - complete retinal dysplasia.
- Sealyham Terrier - complete retinal dysplasia.
- Rottweiler - focal or multifocal.
- English Springer Spaniel - focal, multifocal, or geographic.
- American Cocker Spaniel - focal or multifocal.
- Beagle - focal or multifocal.
- Cavalier King Charles Spaniel - retinal folds, geographic, or retinal detachment.
- Labrador Retriever - focal, multifocal, geographic, or complete retinal dysplasia. It can also be seen in combination with a congenital skeletal disorder.
- Australian Shepherd - retinal dysplasia occurs with other eye disorders, such as an oval pupil, microcornea (small cornea), cataracts, and retinal detachment.

Symptoms

Some dogs have no symptoms and can only be identified with an ophthalmic examination. More severely affected puppies may be partially or totally blind.

Diagnosis

Diagnosis is confirmed by examination of the retina with an ophthalmoscope which may reveal:

- Patchy abnormal discolourations
- Folds in the retina
- Ridges in the retina
- Rosettes
- Detachment of the retina - focal or complete

These changes may not be obvious until the puppy is 6 months of age.

Two forms of the disease are recognized in dogs:

- Multifocal Retinal Dysplasia
 - o Folds of the retina - appear like grey streaks
 - o Rosettes of abnormal colouration on the retina - appear like grey patches
 - o Increased reflectivity of the tapetal (coloured area) of the retina.
- Total Retinal Dysplasia
 - o Non-attachment or complete detachment of the retina
 - o Intraocular haemorrhage may be present
 - o Leukocoria - white appearance (like a cataract) due to the detached retina appearing behind the lens
 - o Microphthalmos (a small eye) may be present
 - o Nystagmus (uncontrolled rhythmic movements of the eye) may be present

Treatment

Laser surgery has been useful in mild to moderately affected dogs to help stabilize the retina and prevent detachments. In severe cases involving glaucoma, affected eyes may require surgical removal to relieve pain.

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