



Animal Eye Clinic

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UVEITIS

What is uveitis?

Uveitis is broadly defined as inflammation within the eye. More specifically it is inflammation of the uveal tract (uvea).

The outer layer that encloses the eye is composed of the cornea and sclera. The innermost layer is a nerve layer called the retina. Between these layers is a blood vessel laden uveal tract which provides nutrition to the eye. The uvea is made up of the coloured iris inside the eye, the ciliary body behind the iris which produces aqueous humour, and the choroid layer which nourishes the retina. Each portion of the uvea can be affected by uveitis, and therefore can be further classified into:

- Iritis – inflammation of the iris.
- Cyclitis – inflammation of the ciliary body.
- Anterior uveitis (iritocyclitis) – inflammation of both the iris and the ciliary body.
- Posterior uveitis (choroiditis) – inflammation of the choroid.
- Panuveitis – inflammation of the iris, ciliary body, and choroid.

The uveal tract is a target for diseases which originate elsewhere in the body due to its rich blood supply. Signs of systemic disease can first be noted in the eye, because the normally transparent cornea can provide a window to early signs of disease. However, uveitis can also originate within the eye as in the case of cataracts, lens changes, corneal ulcers, or trauma.

What causes uveitis?

Uveitis can be a symptom of many different diseases, including:

- Infectious disease – blastomycosis, brucellosis, *E. coli*, ehrlichiosis, Lyme disease, Rocky Mountain spotted fever, other fungal infections, parasites, bacteria
- Cancer – lymphoma, multiple myeloma
- Immune-mediated disease – bleeding disorders
- Trauma – corneal ulcer, penetrating injury, blunt trauma, corneal scratch
- Lens protein leakage – due to injury or cataract changes
- Post-operative inflammation - intraocular surgery
- In cats – feline leukemia virus (FeLV), feline infectious peritonitis (FIP), feline immunodeficiency virus (FIV), toxoplasmosis

In many cases, the exact cause of the uveitis is never determined. However, if a cause is found treatment can be more specific.

What will I see if my pet has uveitis?

The most common signs of uveitis include:

- Pain as evidenced by blinking, squinting, and sensitivity to light.
- The cornea may appear dull, cloudy or blue.
- The conjunctiva becomes red and swollen, often with a watery discharge.
- The iris may change colour, i.e. red.

How is uveitis diagnosed?

Uveitis is not a disease; it is a condition which indicates inflammation within the eye. In most cases uveitis can be diagnosed following a complete history and an ocular examination. The ophthalmologist will use special instruments which magnify and illuminate the structures within the eye. He will examine the external and internal structures of the eye and measure the pressure within the eye. Uveitis can cause a drop in the normal intraocular pressure by causing a decrease in aqueous humour production by the ciliary body. However, uveitis may also result in glaucoma (increased intraocular pressure) if the outflow pathways (i.e. filtration angle, pupil) become blocked. Glaucoma is a very serious disease that requires immediate treatment to prevent blindness.

In order to determine the exact cause of the uveitis, further testing may be required. These tests will look for underlying problems elsewhere in the body. Blood work such as complete blood counts (CBC), biochemical profiles, cultures, and titres, lymph node aspiration, thoracic radiographs, abdominal ultrasound, bone marrow aspiration, aqueous or vitreous centesis, and cerebrospinal fluid (CSF) analysis may be able to pinpoint the cause of the uveitis.

What treatment options are available for uveitis?

Aggressive medical treatment is required to prevent further complications such as glaucoma, scarring of internal structures of the eye and possible blindness. Different medications can be used to control the original cause, if known, and to minimize inflammation. The most common treatments include:

- Anti-inflammatories – given orally and topically to reduce inflammation.
- Corticosteroids – given topically, orally, or by subconjunctival injection depending on the location of the inflammation.
- Non-Steroidal Anti-Inflammatory Drugs (NSAIDS) – given topically, orally, or by injection to reduce inflammation.
- Mydriatics – given topically to dilate the pupil and relax the muscles and will help to reduce pain and the incidence of adhesions. (Not used if glaucoma is present.)
- Antibiotics – given topically and/or orally if there is evidence of infectious cause.

Note that topical corticosteroid use may be postponed if there is damage to the corneal surface due to the fact that they may prevent healing of the ulcer. In some cases of systemic disease, corticosteroid use is avoided due to the risk of complications.

Uveitis, if caught early and treated aggressively, will often resolve without serious consequences. However, there are cases of uveitis in which the cause is never determined and treatment to control the inflammation may be lifelong. In some cases, the uveitis becomes so severe or uncontrollable that enucleation is necessary to make the animal comfortable.