Keratoconjunctivitis Sicca

Ophthalmology Service (KCS)

Michigan Veterinary Specialists℠
www.michvet.com
We Can Help

LOCATIONS:

29080 Inkster Rd.
Southfield, MI 48034
(248) 354-6660

3412 E. Walton Blvd.
Auburn Hills, MI 48326
(248) 371-3713

1425 Michigan St. NE
Grand Rapids, MI 49503
(616) 284-5300

What is KCS?

Keratoconjunctivitis sicca (KCS) or "dry eye" is a condition affecting many pets, most often older dogs. The absence of tears makes the cornea very susceptible to damage. Although it is seen in all breeds some are more prone to developing KCS than others. These breeds include: the American Cocker Spaniel, Dachshund, English Bulldog, Lhasa Apso, Miniature Schnauzer, Pug, Shar Pei, Shih Tzu, West Highland White Terrier, and the Yorkshire Terrier. In cats, the condition is most commonly initiated by feline herpesvirus infection. The condition is a result of decreased tear production and changes in the composition of the tear film. Tear film functions include providing **oxygen and nutrition**, removing **waste products** and debris, **lubrication** to the eyelids, maintaining a **smooth optical surface**, and providing **antibacterial components**.

Causes

There are a number of potential causes of KCS; in most pets the cause is not determined. In dogs the disease is frequently **inherited** and presumed to be caused by an **immune-mediated** attack of the lacrimal (tear producing) gland, especially in those susceptible breeds mentioned earlier. Certain **drugs**, most notably the sulfa-containing medications, may cause KCS depending on the susceptibility of the pet. Neurologic conditions such as **facial nerve damage** can also result in KCS. **Infection and inflammation** of the **lacrimal gland** may cause it to be temporarily or permanently destroyed. Viral infections known to cause damage include **canine distemper** and **feline herpesvirus**.

Clinical Signs

- Increased mucoid discharge
- Discomfort: squinting or pawing at the eyes
- Reddened conjunctiva
- Pigmentation, blood vessels, or a hazy, irregular appearance to the cornea
- Vision loss in severe cases
- Corneal ulceration which may be severe

Diagnosis

Clinical signs are often suggestive of KCS, depending on the severity of the condition. Confirmation is achieved utilizing the **Schirmer Tear Test**, which uses a small strip of sterile filter paper to measure tear production. **Normal tear production** is generally considered to be between **15 and 25 mm** in a minute.

Treatment

The ultimate goal of therapy is the return of normal tear function. Frequent supplementation with a **long-lasting artificial tear** is necessary until tear production increases. Topical eye drops such as **cyclosporine** or **tacrolimus** are used to stimulate the lacrimal gland to produce tears. ***These drugs are very effective but are only helpful as long as they are being used.*** After the initial diagnosis of KCS, topical application of medications may be frequent, but the frequency is decreased as the pet begins to respond to treatment. Although the majority of KCS cases respond well by increasing tear production, the occasional case does not. In such cases frequent medical therapy in the form of an artificial tear every few hours is required on a life-long basis.