



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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Keratoconjunctivitis Sicca

Issue Description

Keratoconjunctivitis Sicca is an eye disease caused by decreased tear production or increased tear film evaporation commonly found in humans and some animals

Other Names

DES, KCS, Keratitis Sicca, Sicca Syndrome, Xerophthalmia, Dry Eye Syndrome, Dry Eyes

Causes

Any abnormality of any one of the three layers of tears produces an unstable tear film, resulting in symptoms of keratitis sicca.

Symptoms

KCS may develop very quickly or more slowly, in one or both eyes. Commonly it is diagnosed in 1 eye first and develops in the other eye within several months. The extent of discomfort depends on the severity of the tear deficiency and how long it has been present. Dogs show their discomfort by rubbing their eyes, squinting, and being sensitive to light. Your dog's eye(s) may be reddened and inflamed, or the cornea may appear dull and dry. There is commonly a thick mucous discharge in the eye or in the area around the eye.

Problems associated with KCS include chronic or recurring irritation or infection of the conjunctiva and cornea, and corneal ulcers. These conditions are painful and, if KCS is untreated, over the long term the normally transparent cornea becomes thickened and scarred. Blood vessels and pigmented cells move in to the cornea because of the chronic inflammation, and blindness may result.

Diagnosis

The diagnosis is easily confirmed by using the Schirmer tear test (STT). The STT, a quick and easy test, should be performed as a routine part of the ophthalmic examination in any dog, but it must be used in every dog of a predisposed breed with conjunctivitis, even with no other clinical signs of dry eye.

Treatment

The goals of treatment are to restore moisture to the eye and to treat conditions such as infection or ulceration that develop because of the lack of normal tears. Tear stimulants and artificial tear replacements are used to treat KCS. Generally it will take a period of trial-and-error for your veterinarian to determine what is best for your dog. A response to tear stimulants may not occur for a few weeks or even longer, and during this time artificial tears must be used as well. Once tear production has been established, often the use of a tear stimulant once daily, or sometimes once every 2 days, will be sufficient to control KCS.

It is important to recognize that this treatment is not a cure for KCS but rather a way to manage a frustrating, painful, and potentially blinding condition. Clinical signs will slowly return if treatment is stopped. When medical therapy is unsuccessful, surgery can be done to transport one of the salivary ducts to provide moisture to the eye.

Traditional medical therapy has largely consisted of replacing the lost tears with substitutes; these include polyvinyl pyrrolidone, polyvinyl alcohol, methyl-cellulose, and hyaluronic acid. This solution does not have a primary effect on the inflammatory process, which continues progressing, nor does it contribute to some of the most important compounds of tears, such as nutrients, antimicrobial agents, or growth factors. Also, because of their quick evaporation, the substitutes have to be frequently administered.

Based on autoimmune etiology evidence, a new treatment has been recently used for KCS. Cyclosporine A (CsA), a non-cytotoxic immuno-suppressant, has been used because of its effects on tear production. It has proved to be effective on interrupting the immune-mediated reaction against lacrimal glands, cornea, and conjunctiva. The drug is a lacrimomimetic agent, even in normal eyes, and also has an anti-inflammatory effect. Different formulations for the topical use of CsA have been developed, such as eye-drops and ophthalmic ointment. Several clinical trials have demonstrated their therapeutic effects.

Breeds Prone To Dry Eye Syndrome

- Beagle
- Bulldog
- Chihuahua
- Japanese Chin
- Kerry Blue Terrier
- Pekingese
- Pug
- Shih Tzu
- West Highland Terrier

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