

## **Keratoconjunctivitis Sicca (KCS)**

Excerpt taken from a Schering-Plough Animal Health brochure

What is KCS? Although difficult to pronounce the clinical name, by breaking this term down into its root components one can get a better understanding of this potentially devastating disease.

“Kerato” is the scientific term for the cornea. The cornea is the outer, transparent fibrous coat of the eye. The conjunctiva is the tissue that covers the interior surface of the eye and the lining of the eyelids.

The suffix “it is” denotes inflammation, and “sicca” means dry. Keratoconjunctivitis sicca is therefore an inflammatory process of the cornea and conjunctiva due to dryness or, more specifically, to a tear deficiency. Commonly called “dry eye,” KCS is a disease that affects middle-to-older-age dogs and has also been reported to affect cats.



Although the exact cause of KCS in the dog can rarely be determined, there is evidence to believe that up to 90% of the KCS cases are related to a problem with the animal's immune system to protect against disease. In certain instances the animal's own immune system can mistakenly recognize parts of its own body as foreign invaders and set out to destroy them. In KCS, it is theorized that the immune system may actually destroy the glands that are responsible for tear production, leaving the dog incapable of producing sufficient tears.

In the remaining 10% of KCS cases, we are often able to determine the exact cause of the disease. Included in this list of causes are drug toxicities, viral infections, surgical removal of the tear gland of the third eyelid, injury to the nerves of the face,

and congenital defects in which the dog is born without well-formed tear glands.

### **Clinical Signs of KCS**

Tears are responsible for maintaining the health of the cornea. They accomplish this role by providing moisture and lubrication, removing debris, and serving as a source of oxygen and nutrients. In addition, tears have antibacterial properties that help to protect against infection. The clinical signs and symptoms that may occur in an eye that lacks tear production are listed below

- Frequent accumulation of mucus in the corners of the eye
- Reddened eye
- Dry and dull cornea
- Squinting and rubbing the eye
- Sealed-closed appearance of eye, in severe cases
- Loss of transparency in cornea
- Possible presence of ulcers of the cornea

If KCS is left untreated, scarring of the cornea may lead to blindness. If your dog shows any of the signs above seek veterinarian treatment now. He can diagnose the disease by the clinical signs and by using a saturation test called Schirmer tear test.

### **Treatment of KCS**

Treatment can range from artificial tears applied frequently along with antibiotics, corticosteroids, and mucolytic agents that help break up the mucus accumulations associated with KCS, to a new promising drug called cyclosporine applied twice daily which can keep the animal's immune system in check so that the tear glands are not destroyed and may also stimulate tear production through a hormonal mechanism. When using cyclosporine, best results are obtained if the dog is diagnosed and treated during the early phases of the disease, so don't wait!!!