

Surgery Can Relieve Dogs' Dry Eyes

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Source: Dr. Erica Tolar

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Like people, pets can suffer a "dry eye" syndrome when the glands of the eyes don't produce enough tears. Dogs and cats have two glands for each eye that supply different components of tears, which are necessary to keep the eye lubricated and healthy.

Keratoconjunctivitis sicca, or KCS for short, develops from dysfunction or underdevelopment of the lacrimal glands, tissue that produces the aqueous portion of tears. According to Dr. Erica Tolar, veterinary ophthalmology resident at the University of Illinois Veterinary Teaching Hospital in Urbana, KCS is common in dogs, especially such breeds as English bulldogs, Cocker spaniels, and pugs. The condition is rare in cats.

KCS can be difficult to identify and diagnose. As Dr. Tolar points out, "The eyes can only display limited signs to indicate that something is wrong. Usually the first noticeable sign is redness, but this can indicate many things, including ulceration, glaucoma, and dry eye." She recommends consulting a veterinarian whenever a pet's eyes become reddened.

KCS also sometimes causes a characteristic thick, ropy, green discharge.

To diagnose KCS or other ophthalmic problems, a veterinarian will typically perform at least three procedures. A fluorescein stain applied to the surface of the eye is to reveal corneal ulcers. Measuring the pressure inside the eye is used to detect glaucoma, an increase in intraocular pressure, or inflammation, which results in decreased pressure. The third is a simple test called a Schirmer tear test, which can help determine if the eye is producing enough tears; a special paper test strip is placed over the lower eyelid, and the veterinarian measures how wet the strip gets. If the strip stays relatively dry, KCS is a likely diagnosis.

Dr. Tolar explains that KCS can be caused by many factors, including immune-mediated destruction, congenital defects, or drug side effects.

Autoimmune conditions may cause the immune system to specifically target and damage lacrimal gland tissue, affecting its ability to produce tears. In these cases, topically applied immune-modulating drugs can help stimulate tear production.

Sometimes KCS can result as a side effect of certain drugs, such as sulfa drugs. Dry eye resulting from drugs may or may not be correctable.

Until the lacrimal glands start producing aqueous tears, usually in several weeks, pet owners must apply tear replacement ointment several times a day to keep pets' eyes lubricated.

Congenital conditions are often seen in Yorkshire terriers, in which the lacrimal glands do not develop fully and are smaller than normal. In this case, drugs that stimulate tear production do not help, since not much tissue is available to stimulate.

In the case of underdeveloped lacrimal glands, usually the only effective treatment is a surgical procedure called a parotid duct transposition. The parotid duct carries saliva from the salivary gland in the cheek to the front of the mouth. This long delicate tube can be surgically re-routed to the eye, where it can supply saliva to replace the aqueous portion of tears, providing lubrication and protection for the eye.

This procedure is usually successful, but Dr. Tolar explains one drawback: "Sometimes when a dog (that had this procedure) gets excited about eating, it may end up spitting a little saliva out through its eye."

For patients whose owners won't mind wiping their pet's face, Dr. Tolar recommends parotid duct transpositions when dogs with KCS don't respond to pharmaceutical treatments.

For more information about pet ophthalmic conditions, contact your veterinarian.

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