



Keratoconjunctivitis Sicca (KCS) / Dry Eye Disease

Keratoconjunctivitis Sicca (KCS), also known as **dry eye disease**, is a condition in dogs where the tear glands produce insufficient moisture to keep the cornea and conjunctiva properly lubricated. This leads to irritation, inflammation, and potential damage to the cornea such as ulceration or scarring. It can be a painful condition and, if left untreated, can lead to vision problems or even blindness.

Causes of Keratoconjunctivitis Sicca in Dogs

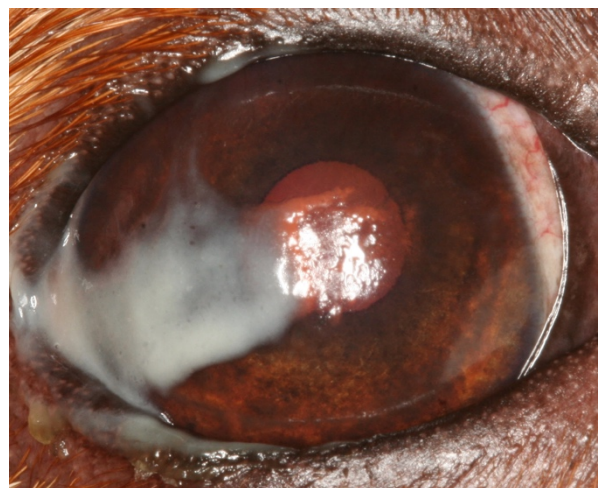
There is a breed predisposition to KCS, including in the **Cocker spaniel, Shih tzu, Pug, and West Highland white terrier**. KCS can be caused by several factors, including:

1. **Immune-mediated destruction of the glands:** this is the cause in the majority of cases, where the body's immune system attacks itself, in this case destroying the tear-producing cells
2. **Trauma** – damage to the nerves to the glands can stop tear production. This could cause neurogenic dry eye, typically affecting one eye and the nostril on the same side due to nerve damage.
3. **Removal of a tear gland** – for example if the third eyelid gland is inappropriately removed in 'Cherry Eye' surgery
4. **Present at birth** – occasionally an animal may be born with very small lacrimal glands that produce little tears
5. **Chronic conjunctivitis** – if the conjunctiva is inflamed for a long time, it can scar over the ducts which are conveying the tears from the glands where they are produced to the eye

Symptoms of Keratoconjunctivitis Sicca

The symptoms of KCS can vary, but common signs include:

- **Red, inflamed eyes** (conjunctivitis, keratitis)
- **Discharge:** Thick, yellow, or greenish discharge from the eyes which look dull or cloudy
- **Squinting or excessive blinking:** Dogs may squint due to the discomfort of dry eyes.
- **Frequent pawing at the eyes or rubbing the face**
- **Corneal ulcers:** If left untreated, KCS can lead to corneal ulcers, which cause more severe pain and potential vision loss.





Treatment of Keratoconjunctivitis Sicca

Treatment for KCS aims to increase tear production, alleviate discomfort, and prevent long-term damage to the eyes. KCS can only be managed, not cured, and therefore treatment needs to be continued for the life of the animal. No matter what treatment is chosen, the eyes need **regular bathing** to clear away the discharge which builds up very quickly. We recommend using clean (e.g. previously boiled) water on cotton wool or gauze swabs, done prior to applying medications.

1. **Artificial Tears:** These are used often to lubricate the eyes and provide temporary relief.
2. **Ciclosporin (Optimmune):** This is an immunosuppressive drug that stimulates tear production. It is licenced and is often one of the most effective treatments.
3. **Tacrolimus:** Another immunosuppressive drug that can be used as an alternative to ciclosporin when necessary.
4. **Topical Corticosteroids:** These may be used to reduce inflammation, but only in cases where there is no active corneal ulcer, as steroids can worsen ulcers.
5. **Antibiotic Ointments:** These may be prescribed to treat secondary bacterial infections that can develop due to the dry environment of the eye, but would only be for temporary use.
6. **Surgery:** In some cases, surgical options such as **ciclosporin implants, medial canthoplasty** (to reduce the size of the eyelid openings), surgical **repair of a corneal ulcer** or **parotid duct transposition** (redirecting the saliva duct into the eye to provide moisture) can be discussed.
7. **Omega-3 Fatty Acids:** These can sometimes be recommended as a supplementary treatment to support tear production. Lacrimalis is an oral supplement available at Eye Vet. It contains omega-3 fatty acids, Lactoferrin and antioxidants that help improve the quality and production of tears.

Prognosis

The prognosis for dogs with KCS depends on the underlying cause and how quickly it is diagnosed and treated. While KCS can be a lifelong condition, with proper treatment, many dogs can live a comfortable life and maintain normal vision. On-going checks ups are required to monitor the condition.

