

CORNEAL ULCERATION

WHAT IS CORNEAL ULCERATION?

A corneal ulcer is a break in the corneal epithelium. The corneal epithelium is the outermost layer of the cornea which provides a physical barrier to microorganisms.

WHAT CAUSES CORNEAL ULCERATION?

A corneal ulcer is most commonly caused by trauma, the cause of which is often not discovered. Other adnexal diseases such as abnormal hairs, foreign bodies and abnormal tear production can also lead to corneal ulceration.

SIGNS THAT YOUR HORSE MAY HAVE CORNEAL ULCERATION

There are a variety of clinical signs horses may display including pain, excessive tearing, a cloudy cornea, and a red appearance to the eye. Some horses may show minimal signs which can make it difficult to know there is a problem until things are quite advanced.

DIAGNOSIS OF CORNEAL ULCERATION

The diagnosis is based upon ophthalmic exam and positive fluorescein stain uptake. At the time of diagnosis additional diagnostics may be performed if there is a concern for infection. These may include corneal cytology and culture. In cases of infection, differentiating between bacteria or fungus is very important with regards to therapy, cost, and prognosis.

TREATMENT FOR CORNEAL ULCERATION

Medical treatment varies significantly based on whether or not the ulceration is simple versus infected. A simple corneal ulceration will require topical antibiotic therapy (usually 3 times daily) to prevent infection, topical atropine sulfate to control the pain of ciliary body spasm, and an oral NSAID (like Bute or Banamine) to control pain and inflammation. Most simple corneal ulcerations should be healed within 1 week. Infected corneal ulceration requires intensive topical therapy that can be needed as often as every 1-2 hours. To make it easier to administer frequent medication, often a subpalpebral lavage system is placed. With medical therapy alone most infected corneal ulcerations can take 4-8 weeks to heal, depending on the underlying infectious organism.

Surgical treatment consists of placing a conjunctival graft which is performed under general anesthesia. The graft will bring in physical support to a weakened cornea as well as direct blood supply to help remove the infectious organisms and repair the unhealthy cornea. Complications associated with conjunctival graft placement include dehiscence of sutures, retraction of the graft, and loss of blood supply to the graft. Complications associated with general anesthesia include colic and injury during recovery, both of which can be serious. Even after surgery, intense medical management will be needed for several weeks and there will always be an opacity in the cornea associated with the graft.

Even with aggressive medical and/or surgical management, infection and associated intraocular inflammation can progress, leading to loss of vision or the need for globe removal.