

Common Problems of the Equine Eye

by Teri A. Schrandt, DVM
River Basin Equine Veterinary Service

Due to the anatomy and nature of the horse eye, it is common for ocular trouble to arise. Most, if not all, problems affecting the eye are considered an emergency. Therefore, any suspicion of an eye problem should be addressed by your veterinarian immediately. A minor eye problem can quickly worsen and turn into a serious risk to your horse's sight. The purpose of this article is to discuss some of the more commonly encountered optical cases in an equine practice.

One of the most frequently diagnosed eye problems in an equine practice is the **corneal ulcer**. The cornea is the outer surface of the eye and functions to protect deeper structures of the eye.

An ulcer is a disruption of, or scratch on, the corneal surface. Ulcers have many causes, from dust/debris being blown into the eye, to a horse sticking its head into tall weeds. Your horse may have a corneal ulcer if he/she is squinting, tearing, or has a white/cloudy spot on the eye.

Your veterinarian will be able to diagnose an ulcer by placing fluorescein stain in the eye. The test is performed by touching a strip of paper containing the stain to the inside of the lower lid. As the horse blinks, their tears will distribute the stain over the corneal surface. If there is a defect (ulcer) on the cornea, stain will stick to the defect.

If noticed early and treated properly, a corneal ulcer will usually heal within 7-10 days with no complications. The most common treatment is application of an antibiotic ointment to the affected eye. An untreated ulcer will cause very serious problems and may even cause the eye to rupture. This is a very painful process for the horse and requires removal of the optical tissue that remains.

Equine recurrent uveitis (ERU), also known as moon blindness, is the most common cause of blindness in horses. We still have much to learn about ERU. Uveitis is an inflammation of the uveal tract, which is the middle layer of the eye. Not all horses with uveitis have ERU. The horse must have multiple episodes of uveitis before ERU should be considered as a diagnosis. It is a chronic (long lasting) and painful condition of an equine eye. The most common inciting factors are *Leptospira* infection, an injury to the eye, or bacterial infection.

Equine influenza, equine viral arteritis, herpes virus and certain parasites have also been found to set off ERU.

The signs of ERU are similar to other eye problems, including squinting, light sensitivity, swelling and redness, tearing and cloudiness of the eye. ERU is diagnosed by your veterinarian through careful examination of the eye. Because this is a persistent problem, owners must learn to recognize when their horse is having a flare-up and initiate treatment quickly. The main goal of treatment is to control pain and inflammation, using topical, as well as systemic, medications.



Conjunctivitis is an inflammation or infection of the conjunctiva, which is the membrane lining the inside of the eyelids. Humans often are affected by a form of bacterial conjunctivitis, which we generally refer to as "pink eye". Infection can be classified as bacterial, fungal, viral or parasitic. Trauma, tumors (such as squamous cell carcinoma), allergies and irritants may also contribute to conjunctivitis. Signs of conjunctivitis may include: redness and swelling, thick, white-yellow discharge, and/or discomfort (rubbing face).

Treatment will depend on the causative factor and may include antibiotic ointment, steroid ointment, dewormers or even surgical intervention. A simple fly mask can be an important tool while treating this problem. It can provide protection, shade, and may prevent the spread of contagious organisms by face flies.

Along with conjunctivitis, it is not uncommon for horses to have an **obstructed tear duct**. Horses have a nasolacrimal duct: a duct that runs from

the corner of their eye to an opening in their nostril. This duct can become blocked and owners will notice a collection of thick, white-yellow discharge in the corner of one or both eyes. Most commonly, the duct is blocked due to inflammation and/or infection of the eye. Face flies can spread infection to your horse's eye and exacerbate inflammation of the eye tissues. Other less common causes of obstruction are: congenital (present from birth) abnormalities, tumors, injury and other infections.

Your veterinarian can place a cannula (narrow tubing) into the duct's nostril opening and flush it with saline. This procedure is simple and will often resolve the problem, although some horses are prone to recurrence and may need their ducts flushed every few months. If the duct is unable to be flushed after cannulation, further investigation is warranted to determine the cause of blockage.

Squamous cell carcinoma (SCC) is the most common tumor of the equine eye. Like many cancers, this is a tumor that occurs in older horses (greater than eleven years). SCC is caused by lack of pigment around the eye and long-term exposure to the sun's UV rays. Therefore, white, gray and palomino colored horses are more likely to be affected. SCC will appear as a growth in or around the eye. The only way to confirm a diagnosis of SCC is to biopsy the growth and send the sample to a laboratory for evaluation.

If SCC is confirmed, treatment may involve surgical removal, injection of chemotherapeutic substances, freezing with liquid nitrogen, radiation, laser removal, or a combination of methods. The choice of treatment will depend on several factors. The size and location of the tumor must be considered, as certain treatments may be detrimental to surrounding tissues. The extent of tumor invasion is also important. Smaller tumors will have the best outcomes after treatment. If left untreated, SCC will invade surrounding tissue (including the eye) and may spread to lymph nodes, salivary glands and the lungs.

Sarcoids are another tumor type, which may be found around your horse's eye. These growths are not specific to the eye area and may be found anywhere on the horse's body. Unlike squamous cell carcinomas (SCC), sarcoids may affect

"Equine Eye;" continued on page 8

Determining Demand for Weed Seed-Free Mulch or Hay?

Are you a horse owner, looking for local sources of 'certified' weed seed free hay?

A new addition to the Iowa Crop Improvement Association's (ICIA) Web site is an opportunity to connect suppliers and purchasers of certified forage and mulch by offering individuals the opportunity to be included on the following lists:

- Potential suppliers
- Potential purchasers
- Current sources of certified forage and mulch

The ICIA began offering a noxious weed seed-free forage and mulch program in 2006 as an opportunity for farmers to add value to their forage or mulch products. This program provides assurance that forage

and mulch sold under this certification will not lead to the establishment of noxious and undesirable plants for the consumer of this product. The certification involves verifying that the hay or mulch field and storage site are free of any seed-bearing plants, from a list of 54 noxious or undesirable weeds.

This certification program has its roots in the western states where the need to prevent the spread of noxious weeds is important both in the national parks and in reforestation and vegetation programs. As this program spread to the Midwest, the potential demand was anticipated to also be with horse owners looking for quality hay, with individuals involved in roadside and erosion-control projects, and with

customers seeking clean animal bedding. What ICIA has learned in the last two years is that Iowa farmers can produce a quality, weed seed-free product. The association has certified beautiful fields of alfalfa, grass, oat, wheat, and native prairie. However, determining the demand and connecting the willing buyer and seller has proved to be more challenging.

If you would like to be added to any one of these lists, please contact the association at 515-294-6921 or at iowacrop@iastate.edu. If you would be interested in certifying a hay or mulch field this year, please contact our office for an application packet or download the information from our website at www.agron.iastate.edu/icia



"Equine Eye;" continued from page 6

younger horses; even foals. Sarcoids are a benign tumor and much less aggressive than SCC. Nevertheless, sarcoids should be removed before growth makes treatment more difficult. Recognizing a sarcoid can be difficult, as they have several forms. They often appear as a wart-like growth, but also develop as a smooth/hard nodule under the skin surface. The horse may have only one sarcoid, or several may be grouped together. Recent literature points to a virus as the

causative agent and implicates flies in the spread of this virus.

There are several treatment options. These options include surgical removal, freezing with liquid nitrogen, laser removal, immunotherapy, and radiation. As with SCC, the treatment choice will depend on factors such as tumor size and location. Even after treatment, sarcoids are likely to return in different areas of the horse's body. Therefore, owners must diligently inspect

their horse and repeat treatment as needed.

The **take-home message** is NEVER NEGLECT ANY EYE ABNORMALITY! Observation is the first line of defense for any medical problem your horse may encounter. If you consult your veterinarian as soon as you suspect a problem, you could prevent a minor issue from escalating into loss of vision/eye. Many optical issues can be resolved, without complication, if you are quick to act and proper treatment is initiated.