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VET NOTES

Peterson & Smith Equine Hospital
4747 SW 60th Avenue, Ocala, FL 34474
(352) 237-6151
pseh@petersonsmith.com
www.petersonsmith.com

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Dr. Emily Latham grew up in rural NH riding and competing hunter/jumper and event horses. She received her bachelor's degree in equine science with a minor in ceramics from the University of New Hampshire. She then travelled abroad to the University College Dublin in Ireland, where she graduated with honors in June 2019.

Her professional interests include surgery, neurology and ophthalmology. Outside of the clinic, Emily loves to swim, draw, paint, read and knit.

Corneal Ulcers
Dr. Emily Latham

Corneal ulceration, also known as ulcerative keratitis, is one of the most common and serious eye problems in horses. Corneal ulcers can range in size and severity. However, all corneal ulcers should be considered emergencies and need to be promptly seen by a veterinarian to prevent complications that can lead to vision impairment or blindness.

Since corneal ulcers are usually painful, the most common clinical signs associated with them are squinting, holding the eye closed and tearing. Other clinical signs include sensitivity to light, rubbing the eye, swelling of the eyelids, redness and/or swelling of the conjunctiva (the inside of the eyelid) and cloudiness of the eye. Cloudiness of the cornea often will look blue and sometimes the contour of the eye may change. A change in contour could indicate a melting ulcer, which requires much more aggressive treatment.

Corneal ulcers are classified based on their cause, infectious or mechanical. Bacteria are the most common cause of infectious ulcers. In Florida, fungal ulcers are also common. There are viral causes as well. Mechanical causes are more common than infectious and include trauma, foreign bodies or problems with the eyelids. Eyelids can have an inability to effectively close due to physical constraints or lack of nervous control. Eyelids can also have ingrown lashes or roll in towards the eye causing the lashes to rub. A mechanically caused ulcer can become secondarily infected, which can complicate the healing process.

Corneal ulcers are typically diagnosed using fluorescein dye, which will stick to the eye in areas where the outer layer of the cornea has been disturbed. Thorough eye exams are performed to identify any mechanical causes for the ulceration. For ulcers that are large, deep, melting, or failing to heal with routine therapy, a scraping of the ulcer bed can be obtained for cytology and culture. The cytologic exam can help immediately identify infectious agents by showing fungal hyphae or seeing bacteria. The culture can confirm these findings and provide a list of antimicrobials the organism is sensitive to.

Corneal ulcers are usually treated with topical antimicrobial ointments/solutions, serum or other anti-collagenase medications, and systemic NSAIDs (anti-inflammatories) depending on their severity. Atropine may be added to control the secondary uveitis that is common with keratitis in horses. Simple, non-infected ulcers can heal in 7 to 10 days with appropriate management. In patients that are uncooperative or in cases of complicated or melting ulcers that will require a long treatment course, a subpalpebral lavage catheter can be placed to allow of ease and surety of treatment application. Topical riboflavin that is activated by UV light has been shown to strengthen the collagen fibers and stabilize the cornea making it a useful addition in some treatment protocols. This procedure is now available at our hospital.

References:

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