Eosinophilic Keratoconjunctivitis in 19 Mares on a Standardbred Farm

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Introduction

- Eosinophilic keratoconjunctivitis is an inflammatory condition affecting the equine cornea typically manifested by ocular pain, caseous ocular discharge, severe conjunctival hyperemia and chemosis, and a characteristic pink proliferative plaque most often located at the temporal limbus. It is diagnosed by the presence of eosinophils on corneal cytology.

- This condition has been associated with parasitic infection or hypersensitivity reaction, and has been reported to respond to immunosuppressive therapy although therapy can be prolonged, even up to 6-9 months. Keratectomy has been suggested as curative.

- This report documents an outbreak of eosinophilic keratoconjunctivitis in Standardbred mares on a single farm occurring in the summer of 2009.

Method

- Mares with ocular abnormalities were identified by the farm veterinarian. Complete ophthalmic examination was performed on the same day for all mares by a board-certified veterinary ophthalmologist on August 16, 2009. Mares were examined again ten months later on June 10, 2010.

- Photographs were taken of both eyes of each mare to document lesions.

- Corneal culture and cytology was performed on any mare with active lesions.

Results

Patient sample:

- Twenty-three mares were identified as having ocular abnormalities. Four were unrelated to eosinophilic keratitis.

- Nineteen mares ranging in age from 3-16 years all housed on the same farm were included in this study based on the presence of characteristic corneal lesions. The farm housed 412 horses, with approximately 200 mares. Only mares were affected; foals, weanling and yearlings were not. Affected mares represented approximately 10% of the broodmare population.

Clinical signs:

- Thirteen out of 19 mares had bilateral disease. In all mares, lesions were characterized by raised pink plaques. These were located predominantly along the inferonasal limbus, with no other ocular abnormalities.

Corneal culture and cytology:

- No growth of infectious organisms (bacterial or fungal) was obtained.

- Eosinophils were identified on all cytology samples taken from mares with active lesions (i.e., characterized by an epithelial defect).

Treatment in August, 2009:

- Pasture and herd management including keeping fields cut short, placing fly masks on the mares when out in the field, allowing periods of stall confinement to reduce time on pasture, and administration of topical fly repellent (Swat®) under the eyes, were associated with resolution of clinical signs.

- Topical steroids were not given to any mares.

- Only the most severely affected mares were treated with topical antibiotics, and this was done only for a short time (i.e., several days).

Conclusions

Follow up in June, 2010:

- Eosinophilic keratoconjunctivitis may have been associated with an insect or environmental hypersensitivity in this outbreak.

- Eighteen of 19 mares still housed at the same farm were examined again by the same board-certified veterinary ophthalmologist prior to the start of the season typically associated with eosinophilic keratoconjunctivitis in this area (July-August) and scars were noted at the site of lesions from 2009. No active lesions were noted.

- Insecticide ear tags labeled for cattle have been applied to several horses on this farm with apparent reduction in fly burden. Reduction in fly burden may prevent clinical signs of eosinophilic keratoconjunctivitis. It is unknown whether ear tags labeled for cattle are safe for use in pregnant mares.

- Treatment with the antihistamine cetirizine (Zyrtec®) may reduce clinical signs in affected mares.

References


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