Medical and Surgical Management of Equine Recurrent Uveitis

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KEYWORDS

• Equine recurrent uveitis • Cyclosporine implant • Vitrectomy • Intravitreal injection
• Gentamicin

KEY POINTS

- Primary uveitis (isolated bouts of inflammation) must be differentiated from recurrent uveitis (multiple bouts of inflammation interrupted by periods of quiescence).
- Medical therapy/management alone leads to severe loss of vision or blindness in greater than 50% of all affected horses.
- There is a breed predilection for ERU in Appaloosa, draft, Knabstrupper, Icelandic, and warmblood breeds.

INTRODUCTION

Equine recurrent uveitis (ERU) is a widely recognized, complicated, multifaceted disease that is characterized by multiple, recurrent bouts of inflammation interrupted by variable periods of quiescence.[1–6] True recurrences of inflammation occur following complete elimination of inflammatory signs (eg, keratic precipitates [KPs], aqueous flare, miosis, cortical [equatorial] cataracts, vitreal opacification, fundus or optic nerve head [ONH] lesions) via topical and systemic antiinflammatory and immunosuppressive medication.[1,5,6] When medical therapy is withdrawn too soon, it may appear as if the inflammation returns within a short period of time (often 2–6 weeks). However, in many cases the signs associated with ERU had not been completely eliminated, but merely suppressed, giving the appearance that the eye had reached a stage of

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quiescence. This premature cessation of medications often occurs if the eyes become comfortable and subtle signs of inflammation (eg, KPs, aqueous flare, vitritis, inflammation of the ONH [optic neuritis]) are missed during reexamination (Fig. 1). This situation is referred to as a pseudorecurrence and can lead to a misdiagnosis or, worse, to progressive intraocular changes resulting in decreased vision or blindness if it goes undetected.[2]

A recent study from western Canada reported that 12 out of 32 (38%) horses with ERU were bilaterally blind on presentation and 20 out of 26 (76.9%) were bilaterally blind at the last follow-up, and 17 out of 20 (85%) of these blind horses were euthanized.[7] In another study from the southeastern United States, 96 out of 338 (28%) of the eyes presenting with ERU were blind on initial presentation.[8] Forty-one out of 338 (12.1%) eyes were enucleated and 29 out of 224 (14.9%) of the horses were euthanized.[8] Both of these studies reveal that too many horses are being referred far too late in the disease process (Fig. 2).[7,8] Therefore, it is essential that horses showing subtle clinical signs that are not immediately associated with ERU (intermittent redness [conjunctival hyperemia], tearing [epiphora], squinting [blepharospasm]) should be thoroughly examined for additional signs associated with chronic or recurrent uveitis (KPs, aqueous flare, miosis, decreased intraocular pressure [IOP]). This approach will allow for targeted therapy to be administered early in the disease process, which may prevent more severe secondary complications from developing, and will initiate a reevaluation pattern by owners, referring or primary veterinarians, and veterinary ophthalmologists alike, which may increase the likelihood of preserving vision.

There are several alternative treatment approaches that may prove useful in the earlier stages of intervention and may result in fewer horses losing vision or requiring more invasive surgical intervention to control inflammation caused by ERU. Such treatment options include intravitreal gentamicin (IVG) injections,[9–11] intravitreal triamcinolone injections,[12] intravitreal rapamycin injections,[13] suprachoroidal space injections of triamcinolone,[14] surgical placement of suprachoroidal cyclosporine sustained-release devices (cyclosporine implants),[15,16] and pars plana vitrectomy.[17–19] Diagnosing ERU and selecting the most appropriate treatment option is tedious, difficult, and riddled with setbacks. Conservative medical therapy provides the foundation of therapy and should be initiated in every case

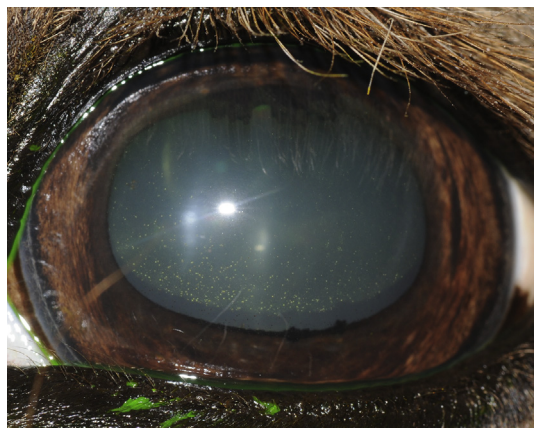

Fig. 1. Although the eye is open and comfortable, a moderate number of endothelial KPs remain visible during direct retroillumination. The dark, pinpoint KPs appear refractile during retroillumination. The pupil has been pharmacologically dilated.