



ST DAVID'S EQUINE NEWSLETTER

Vol. 5 Issue 4

AUGUST 2009

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OKEHAMPTON SHOW

Okehampton Show will take place on Thursday August 13th this year and we are all hoping for sunshine for its return! If you are planning to attend the show don't forget to visit our stand for a chat and a drink with Tony Kaye and Claire Hawkins who many of you will speak to when you phone the practice.

INFECTIONS CURRENTLY IN DEVON

Strangles is on the rampage yet again throughout South Devon although it is doubtful it ever leaves! Please make sure that you follow sensible hygiene precautions if you take your horse anywhere to compete and try to isolate new horses when they come onto your yard. More details can be found in the previous copies of the newsletter on our website.

We're also seeing a number of horses with a mystery viral infection. These horses are showing respiratory signs, increased temperatures and sometimes gastro-intestinal signs. They can be mildly anaemic and lethargic. Some are not too badly affected while others are completely flat and take 2-3 weeks to recover with rest, nursing and B vitamins. Samples have been taken from some affected animals and have come back from the lab negative to known viruses. If your horse shows these signs, try to isolate them from other horses and call your vet.



NEVER MISS A COPY OF THE NEWSLETTER!

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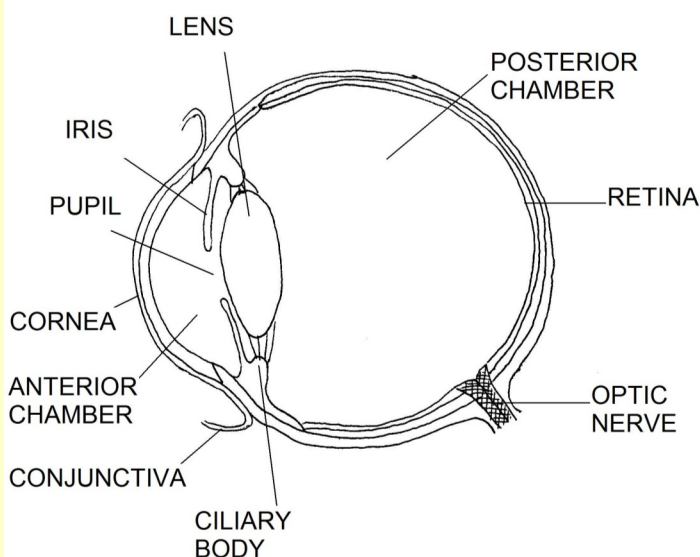
THE EYES HAVE IT

OPHTHALMOLOGY—PART ONE

Eyes are complicated and delicate structures, and horses' eyes present particular diagnostic and treatment challenges. This article aims to explain, in simple terms, the anatomy and function of the horse's eye, how we examine them and the techniques we can use to treat them.

Disease and damage to the equine eye can escalate quickly, and without veterinary intervention can result in, at best, some loss of sight and, at worst, blindness or loss of the eye alarmingly quickly. Any eye problems should be examined promptly.

Below is a simplified diagram of the horse's eye.



In short, light enters the eye through the cornea and is focussed onto the retina by the lens. The image is sent via nerves from the retina to the optic nerve and then to the brain. The image information gathered by the retina is upside down and back to front. Like us, this is sorted out by the brain so the horse 'sees' the image the correct way up and the right way round. Obviously, any damage or abnormality of the cornea, anterior chamber, lens, posterior chamber, retina or optic nerve could seriously affect vision.

As a prey species, the horse has a very wide field of vision with the only blind spots being directly in front of the nose and several metres behind the horse. As the horse's eyes are very sensitive to motion, it is difficult to sneak up on them! Horses have good vision in dim light (aided by the reflective part of the back of the eye or tapetum) and are thought to be able to see yellow, green and blue but not red.

There are tests we can perform to try to ascertain whether a horse is blind or not. Some horses cope extremely well with very poor vision or vision in one eye only and so it's sometimes not that easy to tell! Signs of blindness include bumping into things such as stable walls, difficulty in leading, especially through gates and a high stepping gait. We can perform a menace test by passing a hand or other object past the eye and seeing if the horse blinks. Obstacle courses are also useful.

To examine the eyes properly we need access to a stable or examination room which ideally can be completely darkened. This obviously isn't possible in some instances but is vital for pre-purchase examinations (vetting). Sedation is often required especially if the eye is painful although this can affect the results of some neurological tests so these are usually performed first if required. Nerve blocks may also be needed in some situations:

- Auriculopalpebral nerve block—motor (movement) block of the upper eyelid allowing the eye to be opened without using force (if you've ever tried to open your horse's eye to apply medication or to have a look, you'll know how powerful the eyelids are!).
- Frontal nerve block—sensory (feeling) block of the upper eyelid

EXAMINATION

An examination of the eye may proceed as follows. All cases are different and all of these steps may not be required in every case.

1. Observe the horse from the front and look for symmetry of the eyelashes, size of the eyes, their position, pupil symmetry and orbital symmetry. The angle of the eyelashes can indicate a neurological problem or difference in the size of the eyes. The orbits are the rings of bone around the eye sockets and these can be fractured following trauma. The vet will also look for discharge at this point.
2. Assess menace response, pupillary light reflexes and perform a neuroophthalmology exam if necessary. The pupillary light reflex is where a bright light is shone into one eye and should result in the pupil of that eye constricting (getting smaller) and also the

pupil of the other eye constricting to a lesser degree. The light is then shone into the other eye and the pupil should constrict further. This tests the function of the retina, optic nerve and optic tracts. Darkness is needed for this test.

3. Schirmer tear test to assess tear production.
4. Sedation and nerve blocks if needed.
5. Samples taken for culture (bacterial and fungal) and sensitivity. These are sent to a lab to be cultured. Sensitivity means that the lab ascertains which antibiotic or antimicrobial drugs the bugs involved are sensitive to. This is very important when treating eye infections. Topical anaesthesia (straight onto the surface of the eye) can then be used.
6. Fluorescein staining which can show corneal ulceration.
7. Intraocular pressure assessed (rarely done in practice) and nasolacrimal irrigation performed. The nasolacrimal duct drains the eye to the nostril and if blocked can result in tears running down the face of the horse.
8. Examine the inside of the eyelids and look behind the 3rd eyelid for foreign objects.
9. If the back of the eye needs to be fully examined and the intraocular pressure is normal then the pupil can be dilated using drugs.



When the vet comes to examine your horse's eyes you'll be aware of some of these steps but not others. We most commonly use a direct ophthalmoscope to examine the interior of the eye. This gives an upright image of the back of the eye and its light can be used to examine the cornea. Examination using a direct ophthalmoscope is shown to the left.

TREATMENT TECHNIQUES

Topical treatment (directly onto the surface of the eye) is commonly used when treating eye disease and many drugs penetrate the cornea well.

Some horses will allow drugs to be applied directly into the eye from the bottle or tube or to be squirted in from a syringe. This technique is good if the horse is compliant or a short course of treatment is required. If the eye is painful, it can quickly result in a head shy horse. If the vet asks you to administer drugs to your horse in this way (which is very likely as most ophthalmic drugs need to be reapplied every few hours)

don't let them leave until you're happy doing it!

Another common delivery technique for drugs is a subpalpebral lavage system. This is an excellent way of administering drugs to the eye frequently and over longer periods and is sometimes essential for vet and owner safety as horses with painful eyes can become dangerous to treat. The system consists of a long piece of flexible plastic tubing with a needle at one end and a footplate with a hole for drug delivery at the other end. The needle is pushed from inside the eyelid out through the skin and pulled through until the footplate is resting snug against the surface of the eye. The tubing is attached to the face using sutures, passed between the ears and attached to the mane. The needle is replaced by an injection cap which allows a syringe to be attached and therefore drugs pushed through the tubing and delivered to the surface of the eye.



Sedation, nerve blocks and local anaesthesia are required for placement of the system. Subpalpebral lavage systems can often be maintained at home but sometimes hospitalisation is required. They must be monitored carefully as they can cause ulceration, pain and infection if they become dislodged. Subpalpebral lavage systems are a cost effective method of administering drugs as you can be certain that the treatment is going where it's needed and not all over you!

Other topical treatment techniques which are sometimes used are bandage lenses (contact lenses), indwelling nasolacrimal lavage systems (lavage system placed through the nasolacrimal duct and exits at the false nostril) and subconjunctival injections.

Systemic therapy (medications given by injection or mouth) is often used in conjunction with topical therapy when treating eye disease and is very useful.

Always follow directions carefully when administering prescribed drugs to your horse and always finish the course of drugs otherwise a relapse can occur.

Part two of this article will explain the common diseases and abnormalities of the equine eye and their treatment. Look out for it in the October issue of the newsletter.

Alison Reed

SAYING GOODBYE TO YOUR HORSE

Most horse owners at some point will have to deal with the death of their horse. Some horses come to the end of their lives and die naturally but this is unfortunately a relatively rare occurrence. Most horse owners will have to deal with having their horse euthanased (put down or put to sleep). In some cases, if you know that your horse is ill or elderly, this can be planned and there may be plenty of time to think about how you want it to happen and what options you have. In many cases though, horses have to be euthanased as a result of a sudden illness, such as colic, or a serious injury. In these cases there is often very little time to think about what you want to happen to your horse.

There are two common methods of humane destruction for the horse. The first is by gunshot and the second is by lethal injection.

All horses which are to enter the human food chain or are to go to the hunt must be shot. Anyone who shoots horses must be licensed by the police and trained. The advantages of this method is that it is very quick, there are no needles and the body can be disposed of by any permitted method. The disadvantages are that it can be loud and unpleasant for the owner, and all the inherent risks associated with firearms. If a horse is in pain and upset, this may not be the best option. The gun is placed on the forehead at the centre of an imaginary cross between the left eye and right ear and the right eye and left ear. Death is instantaneous and the horse collapses on the spot.

Most horse owners prefer to have their horse put to sleep by lethal injection. Many people feel this is a quieter and more pleasant method to witness. Only vets are allowed to euthanase a horse by injection. All vets use a slightly different method, some like to give the horse a low dose of sedative first and some don't, some vets will always place an intravenous catheter and some will use a needle for injection. The method that I always use is to give a small dose of sedative and let that take effect for a few minutes. Then, after putting a bleb of local anaesthetic under the skin over the jugular vein, inserting a catheter into the jugular and checking carefully that it is in place within the vein. The lethal injection is then given slowly over about 20 seconds. We use an overdose of barbiturates which shuts down the brain before shutting down other bodily functions—this ensures that the horse is unconscious before the heart stops. Horses will usually take a couple of deep breaths before collapsing unconscious. The main disadvantage of this method is that there are fewer routes of disposal available.

It is currently illegal in the UK to bury a horse without the permission of the Local Authority so thought must be given to disposal. Horses are considered to be companion animals rather than farm animals so in some cases it is possible to get permission to bury a horse on your land but this is at the discretion of the Local Authority. If a horse is shot, it can be taken to the local hunt, or in some cases can enter the human food chain. There are only a few premises in the UK which are able to take horses for human consumption and the horse must be transported there and shot on site so this takes some planning. Also, horses can only enter the human food chain if their valid passport has always stipulated that they are destined for human consumption and so have therefore never had certain drugs such as bute. In most cases, a horse which has been put to sleep is collected by an animal disposal service and cremated. There are a number of options available to you if your horse is to be cremated. You can ask for a general cremation where your horse will be cremated with other animals collected that day or an individual cremation where your horse will be the only one cremated at that time. With each of these options you can request a sample of the ashes to be returned to you or in the case of individual cremation you can request all the ashes back. Do bear in mind that you will receive approximately 20kg of ashes back in this case!

Euthanasia is a subject that, naturally, most horse owners do not wish to think about but a little forethought as to what you would like to happen to your horse at the end of its life can go a long way in relieving some of the stress and heartache this event inevitably brings. It is also wise to tell anyone looking after your horse for you your wishes in case you cannot be contacted. If your horse is subject to an insurance claim you must always inform your insurance company of your intention to have your horse euthanased.