



Equine Cushing's disease is a condition of aged horses, ie over 15 years of age, and is a result of a number of hormone related problems that derive from changes in the brain. It is also known as ECD, hyperadrenocorticism and pituitary adenoma. It is sometimes called Cushing's syndrome suggesting that it is a disease with a variety of symptoms, some of which may be present at any one time. Equine Cushing's disease is notably different in many respects from the condition with the same name in dogs and humans. Cushing's disease cannot be cured, but treatment is sometimes effective and can prolong and improve the quality of life for affected horses. All types of horse can be affected - ponies commonly seem to be predisposed because they tend to live longer!

What is Equine Cushing's disease?

Cushing's disease is a degenerative disease of the brain stem. The hormonal consequences of this are mainly the overproduction of cortisone from the adrenal gland. Although this is the common consequence in most cases, it is by no means the only change that occurs. The main target organ for the condition is the pituitary gland. The gland becomes very active and can enlarge significantly - this is sometimes viewed as a tumour. The hormones produced by the overactive pituitary gland causes the adrenal gland to become overactive.

How do I know if my horse has Cushing's disease?

The most obvious sign is the characteristic long, curly coat (hirsutism). Over a number of years variations in the coat length and density develop. There may be variations in natural spring shedding and in some cases, spring moulting does not take place at all. The coat becomes very dense, long and curly. Sweating is a common event and the coat often feels damp. Sweating is a result of warmth from an excessively thick, long coat and some of the hormonal changes and the pressure on the base of the brain where the thermoregulatory centres are located.

One of the commonest and most serious consequences of the condition is laminitis. This can be very serious but more often is less severe initially at least. Other causes of laminitis have to be considered but it is well known that a high proportion of Cushing's cases have recurrent mild (sometimes more severe and even extreme) laminitis, without any of the other more obvious causes.

Excessive drinking and urine production are usually associated with a diabetic state where the blood sugar is elevated and repeated urination may make the bed excessively wet.

Because the condition results in suppression of the immune system, skin and other infections are common. Sometimes, lice, ringworm, bacterial dermatitis and internal parasites can be serious complications. Foot abscesses develop both from laminitic changes and poor hoof quality as well as reduced body defences. Sinus and dental infections are common and so many affected horses have an infected nasal discharge down one or sometimes both nostrils. The depressed healing responses mean that wounds often fail to heal; even small ulcers in the mouth remain over some months and often enlarge significantly.

Weight loss from muscle wasting gives the affected horses a sway-back/ewe-necked appearance but fat redistribution causes abdominal enlargement and possibly bulging of the hollow above the eyes.

If the pituitary gland enlarges significantly it can press on the optic nerves and the brain and cause blindness and seizures.

If you think your horse might have Cushing's you should consult with your vet.

How will my vet confirm the diagnosis?

There are numerous blood tests that can be used to make a more-or-less definitive diagnosis. Your vet will decide if the diagnosis can be based simply on the clinical presentation or if blood samples or specific tests are needed. Because blood glucose is elevated in a high proportion of cases, and because this results in glucose in the urine a combined urine analysis and blood sugar estimation can be as helpful as any of the core sophisticated tests. The benefits of treatment are usually variable in any particular case - sometimes drugs result in a significant improvement in hair coat shedding and in others the amount of drinking reduces. However, a total restoration of the abnormalities is very rarely achieved.

**How will my vet treat my horse?**

There are no cures for Cushing's in horses. There are however useful drugs and some management procedures that will help significantly.

Probably the nursing aspects are the most important - reliance on drugs is usually insufficient. Clipping of the coat and regular dental and farrier attention will help. Careful and regular worming and early detection of infections is essential. Checks on the bodyweight and general health are very helpful but need to be regularly carried out

Most feed merchants will be able to provide useful nutritional guidance for the older horse and a well nourished, well maintained horse may live for many years with the disease.

How can I prevent my horse from developing the disease?

Most aged horses develop Cushing's if they live long enough! There are some cases however, that do not seem to be affected at all.

What is the long-term prognosis?

Drug treatment is inevitably expensive as it based on the use of human drugs. Given a good response to the drugs and good management, many horses have lived with Cushings Disease for years. Cases that are complicated by severe laminitis, sinus infections, etc have a much poorer outlook.

In severe cases and cases where secondary complications develop, eg neurological manifestations, prognosis is poor and treatment is unlikely to have an effect.

If you want any other information on health issues concerning your horse please contact Hampden Veterinary Hospital on 01296 423666 and we will be happy to advise you.