The Chronic Laminitis case
A major part of the management of the chronic laminitis case is remedial farriery and it is important that your vet and farrier are working together as a team to provide you with the best care.

But as well as treating the feet it is essential to treat the underlying cause if it still present – if the laminitis is caused by EMS or PPID, then it certainly will be.

You will need to undertake diagnostic tests to tell if one or both of these is occurring and treatment will be recommended based on this.

Management of EMS
If your vet suspects or has confirmed your horse has EMS, then they may advise starting a diet to encourage long term weight loss. If your horse has EMS, then treatment is primarily diet and exercise so you may need any medication at all!

Management information about diet and exercise is on our hospital laminitis page (see back page of leaflet).

Laminitis in horses and ponies with PPID
If your vet has diagnosed your horse with PPID (or Cushing’s disease) they will often prescribe Pergolide for your horse which is a dopamine receptor antagonist (speak to your vet about worm control) and make sure they have good doer’ (prone to gaining weight easily) they may be genetically predisposed to EMS. More serious alarm bells should ring if your horse or pony develops bulging areas above the eye (instead of the hollows that normal horses and ponies have) or develops hoof changes such as laminitic rings, dropped heels or separation at the white line.

If you suspect EMS in your horse, your vet can perform an in-...
What is Laminitis?
Laminitis is a serious form of lameness in horses characterized by a hot, painful hoof, with bounding pulses that can be felt in the digital arteries down the back of the fetlock and pastern region.

Laminitis has a number of possible causes but the outcome is damage and weakening of the lamellae or laminae. These are the attachments that provide support between the hoof wall and the pedal bone.

The main problem, in Laminitis cases, is damage to the lamellae causing the lamellae to weaken and elongate. Ultimately and in severe cases, these weakened lamellae can actually break, the pedal bone no longer supported in the hoof capsule.

Loss of strength within the lamellae allows the pedal bone to shift within the hoof capsule and it can be either rotate away from the hoof wall (as the result of the bone acting dorsally or even penetrates the sole), or slant, or both. This is found founder and can be extremely painful, and in some cases can cause euthanasia of the horse for humane reasons.

How do I know if my horse / pony has Laminitis?

The main clinical signs of laminitis are pain and lameness. However, some horses have episodes of laminitis that cause deformity of the hoof wall in the forms of laminitic rings, without pain.

These are very important to pick up early as they may indicate your horse has metabolic disease. Getting a diagnosis from your vet could allow you to prevent partial laminitis and foundered hoof from ever occurring.

Laminitic rings are classically wider at the heel than the toe. They may be accompanied by a flat or even convex sole (dropped sole) and wider white line cap horn.

Lameness is usually in all 4 limbs, but usually (not always) appears worse in the forelimbs. The pain may be so bad that the horse won’t move at all, but in many cases it is a little more, causing a shuffling of the foot, slow and on hard surfaces, and usually with an obvious dirty foot on tiling.

Overload laminitis just a single limb can be affected.

Other signs of laminitis can be a hot, painful hoof, with bounding pulses felt in the digital arteries down the back of the fetlock and pastern region. Your vet may look at the responses to hoof hardness to help confirm laminitis. It is worth bearing in mind that heat, pain and pulses can be caused by other conditions in the foot, so always seek advice from your vet.

What causes Laminitis?

This is a VITAL question which needs to be asked in every case of laminitis. There are many factors that could cause laminitis. Despite the name, only certain types of laminitis are truly ‘inflammatory’ and in fact, the most common type of laminitis developing from metabolic disease is not really inflammatory at all.

In the past laminitis was treated as a disease process and treatment only focused on the clinical signs of laminitis. We now know that most cases of laminitis are a clinical sign of diseases elsewhere – either severe systemic inflammation disease or a metabolic condition.

There are 2 main causes of Laminitis; Overload, Inflammatory and Metabolic.

Overload Laminitis
This is a less common cause of laminitis and is typically associated with non-weight bearing conditions in one leg thereby overload the opposite leg. The most famous example of this was the American racehorse Barbaro who had a bone fracture in one hind limb which was successfully fixed, but he unfortunately developed laminitis in the other hind leg, ultimately resulting in him being euthanised.

Inflammatory Laminitis
One example of this is grain overload such as when a horse / pony has been overfed with non-starch carbohydrates in both of these forms of laminitis RADIOPHOTIC AND CROSS-SECTIONAL VIEW OF OVERLOAD LAMINITS. Note the elongation of the lamellae. The hoof wall and the pedal bone. This may be caused by conditions, involves an excessive increase in dietary carbohydrates in both of these forms of laminitis. This does not mean that all obese horses or ponies have EMS, but if the horse or pony has EMS then obesity will worsen the carbohydrate metabolism and predispose to laminitis.

Metabolic Laminitis
This is the most common cause of laminitis in the UK. Metabolic causes include pituitary pars intermedia dysfunction (PPID), Cushings disease and equine metabolic syndrome (EMS). - horses with diseases where horses have abnormal control of their carbohydrate metabolism and as a result have abnormally high levels of the hormone insulin. Laminitis is a common disease of horses in both of these conditions, involves an excessive insulin response to starches (main carbohydrate in grains) or sugars (main carbohydrates in grasses and hay) in the horse feed.

PPID and EMS are not the same though! These are two distinct metabolic disease conditions that cause severe damage to the lamellae of the hoof.

PPID
PPID is a disease of ageing, where the control of pituitary gland hormone secretion is lost, leading to excessive secretion of adrenocortical hormones from a certain part of the gland (the pars intermedia, as in PPID). If a horse has this condition, there may be a variety of the clinical signs, including poor condition, a long hair coat due to delayed shedding, sweating, loss of muscle mass, development of a pot belly and drinking excessively. Some of the hormones produced from the pituitary also affect carbohydrate metabolism and can predispose to laminitis. Many PPID horses/ ponies may have been originally fat, so when they lose muscle their fat often looks strange and lumpy. PPID is not caused by obesity.

EMS
EMS (equine metabolic syndrome) tends to occur in genetically predisposed breeds (especially native ponies), and is worsened by obesity. This does not mean that all obese horses or ponies have EMS, but if the horse or pony has EMS then obesity will worsen the carbohydrate metabolism and predispose to laminitis.

For more information on the causes of and the management of laminitis, visit our website for a list of useful resources at: www.liverpool.ac.uk/equine/philipleverhulmequinehospital

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