

CONTENTS

Care of the donkeys foot.....	1
The lame donkey	2
Laminitis	2
Chronic foot disease	3

CARE OF THE DONKEYS FOOT

In their natural habitat donkeys browse on sparse, fibrous vegetation, wandering over long distances in an arid, semi-desert environment surviving for perhaps 10-15 years. In developed countries with damp temperate climates most donkeys are kept as pets, enjoying a surfeit of good grazing and taking little exercise. They may live well beyond 30 years of age. Consequently, it is almost inevitable that foot problems will develop in this environment. Good hoof care is essential if these problems are to be minimised. This necessitates attention to each of the following.

- Daily hoof care and regular routine farriery.
- Good pasture and stable management.
- Correct feeding and general health care.

Neglect of any of these factors will risk problems developing.

The normal donkey foot

- Little objective study has been undertaken. The basic structure is similar to other equids; however there are significant differences.
- Both fore and hind feet are 'U' shape.
- Solar horn growth matches that of the walls.
- Wall thickness at the bearing surface is not reduced towards the heels.
- Microscopically horn tubule size, density, and distribution differ from the horse, generally being larger and fewer in numbers.
- Radiographically the extensor process of the pedal bone is below the upper limit of the hoof capsule in normal feet.

Routine trimming and trimming the overlong foot

Donkeys generally require trimming every 6-10 weeks. Many are unused to handling so thoughtful restraint and well fitted head collars are invaluable. Excessive lifting of limbs, particularly of elderly donkeys with progressive osteoarthritis can cause discomfort and struggling.

- Assess for any evidence of 'chronic foot disease'.
- Consider lateral weight bearing radiographs if in doubt.
- Attend to the sole first, removing all loose and necrotic material and paring back any overgrown frog.
- The sole is pared back in increments until 'thumb pressure' between the apex of the frog and the toe causes the sole to yield perceptibly.
- The wall should be dressed back guided by the pastern axis and the angle of the wall at the proximal midline. Medio-lateral balance should be assessed and adjusted if necessary.
- The balance, gait and comfort of the donkey should be assessed post trim.
- Consider advice on management, feeding and post farrier analgesia and care.

THE LAME DONKEY

Lameness is often only recognised at an advanced stage in 'pasture ornaments'. Lamé donkeys are often recumbent for long periods and may have a depressed appetite increasing the risk of hyperlipaemia. A full clinical examination is advisable, including at least a visual inspection of the serum/plasma from a blood sample. Hospitalised donkeys particularly when offered a more dry fibrous diet, are at risk of large intestinal impaction and should be monitored closely, especially if receiving analgesics.

Pedal sepsis

Pedal sepsis is the commonest cause of acute lameness. Abscesses frequently track proximally from the white line at the bearing surface to eventually rupture at the coronary band.

- Trim the foot back to a normal length and conformation initially.
- The entire bearing surface should then be explored, paying particular attention to the white line area.
- Chase suspicious 'black marks'.
- Hoof testers are of limited value; digital pressure at the coronary band often illicit a response from a related distal abscess.
- Consider re-secting the overlying hoof wall to facilitate drainage, but beware injury and prolapse of the underlying sensitive corium.
- Consider abaxial sesamoid nerve blocks to facilitate exploration and movement of severely lame donkeys.
- Sub solar abscesses are often associated with terminal chronic foot disease/chronic laminitis and pedal bone degeneration.
- Beware prescribing systemic antibiotics prior to establishing adequate drainage.
- 'Hot tubbing' and flushing lesions with dilute Povidine iodine (Pevidine antiseptic solution, C-Vet) is often useful.
- Hospital shoes/surgical plates are often cost effective for protracted cases.
- Daily dressing changes should be carried out.
- Do not neglect analgesia, tetanus prophylaxis and appropriate nursing care.
- Sugardine mix is a cheap and effective final dressing application. With a potent fungicidal and antibacterial action, it also promotes the drying and hardening of lesions. Sugardine is made by mixing Pevidine antiseptic solution with granulated sugar to create a crumbly texture.

LAMINITIS

A common yet often unrecognised problem, the owner may not be aware of mild, acute episodes that are frequently recurrent. Repeat bouts of laminitis cause serious structural damage to the hoof. The causes would appear to be similar to those precipitating laminitis in other equids with the predisposing factor being PPID and/or EMS in combination with.

- Grazing rich in soluble carbohydrate/fructan.
- Feed overload, e.g. large meals especially of cereal type mixes.
- Obesity.
- Trauma, e.g. inappropriate farriery, overlong feet, uneven weight bearing (longstanding lameness in contra lateral limb).
- Generalised/systematic illness e.g. PPID and toxaeimias associated with infections.

Laminitis cases deserve to be treated as an emergency and require a full clinical examination. Typical symptoms include.

- Reluctance to move, recumbency and a preference for softer ground.
- Foot pain especially over the midline coronary band.
- Increased volume and pressure to the pulse in the digital arteries abaxial to the fetlock joint.
- Weight shifting and alternate raising of the fore feet.
- Increased weight bearing on the heels.
- Feet landing heel then toe.
- Pain may cause an increase in pulse and respiratory rates.

Any combination of feet can be affected and all four feet should be assessed.

Treatment

- Remove inciting cause/treat the precipitating condition.
- Provide initial analgesia I/V then orally, e.g. Phenylbutazone 4.4mg/kg I/V then 2.2mg/kg BID PO.
- Acetylpromazine 10mg/ml I/V 0.25ml/50 kg then 1 x 25mg per 50 kg BID (monitor for potential excessive sedation).
- Footpads – cover the entire sole with a thick pad. Frog supports are inappropriate for donkeys.
- Deep shavings beds are very useful.
- Rest and minimise walking – many weeks are necessary to regain lamellar stability.
- Appropriate diet, e.g. limited meadow hay, feed straw and high fibre, low soluble carbohydrate feeds. Do not starve.
- Re-examine after 24 hours if possible.
- Radiograph unresponsive cases.
- Explain nursing duties, feeding and farriery needs clearly to the owner.
- Consider blood sampling/urine testing recurrent cases.
- Plan weight control strategy.

CHRONIC FOOT DISEASE

This includes white line disease, seedy toe, onychomycosis, hollow hoof disease, chronic laminitis, and chronic founder. It is difficult to rationally separate all of these so called conditions. Experience would suggest that in many ways they are interlinked, varying only in the degree to which the individual symptoms are manifest. One may occasionally see feet with relatively minor lesions of seedy toe in an otherwise outwardly normal hoof. However significant lesions will almost invariably be associated with other abnormalities and the recommended approach to the care of these problems is similar.

White line disease/Seedy toe are usually conditions of significance following recurrent laminar disease. The poorer quality horn and the 'stretched' white line particularly at the toe facilitate the entry of fungi and bacteria, which further degrades the hoof capsule.

Seedy toe affects the horn layer on the outside of the white line and may be seen to radiate from a point of penetration of the white line. The horn takes on a grey crumbly texture with lesions varying in their severity from minor slits in the hoof wall to extensive separation of the wall from the white line. Such advanced lesions can extend for several centimetres towards the coronary band and for much of the circumference of the hoof. Filled with a degenerative mix of crumbling degenerate hoof material and debris, these lesions may sound hollow on percussion.

Seedy toe lesions are rarely acutely painful. They do however predispose to the development of abscessation, in which case the donkey may be very lame (see advice on pedal sepsis). Various factors appear to predispose to the development of seedy toe, these include.

- Damp, dirty bedding.
- Muddy paddocks.
- Faecal and urinary contamination.
- Poor diet.
- Recurrent/chronic laminar disease.
- Delayed farriery.
- Old age.

Treatment

Treatment is aimed at debriding all the affected horn, rebalancing the hoof, and providing dry clean bedding. Due to the different hoof wall loading pattern and thick sole, donkeys can cope quite well with extensive debridement at the toe. However, radiographs can be useful to assess underlying pathology in cases where the sole appears thin or there is doubt about how much hoof to resect. This is particularly recommended in donkeys with signs of concurrent chronic laminitis and dropped soles. A Sugardine dressing can be applied for a couple of days after resection to harden the remaining hoof. Apply to the affected hoof and keep in place with a thick cotton wool pad, cohesive type bandage and silage bag patches to waterproof the bandage.

Should you require further information please contact the Veterinary Department, Slade House Farm, Sidmouth, Devon EX10 0NU, by telephone on +44 (0)1395 579162, or by email to vets@thedonkeysanctuary.org.uk