THE DONKEY SANCTUARY

SYCAMORE RELATED ATYPICAL MYOPATHY - INFORMATION FOR DONKEY OWNERS

Atypical myopathy (AM) is a frequently fatal muscle disease due to the toxin hypoglycin A destroying skeletal, respiratory and heart muscle. Cases have been reported in horses and donkeys. The disease has been reported in the UK, Northern Europe and North America. In Europe it is caused by a toxin in the 'helicopter' like seeds from the sycamore (Acer pseudoplatanus) whereas in the USA, seeds from the box elder (Acer negundo) have been implicated.

Sycamore 'helicopter' seeds

Sycamore leaf

The last few years have seen a sharp increase in cases in the UK, due to extreme seasonal changes in weather. Due to the destruction of skeletal, respiratory and heart muscle the affected animals have difficulty standing and breathing. The breakdown of muscle tissue and excretion via the kidneys results in reddish discolouration of the urine.

The condition has a high mortality rate; initially approx 70% of affected horses died or were euthanased, but more recently this rate has dropped to around 50% as cases are more quickly identified and thus treatment begun earlier. The time between onset of clinical signs and death can be as little as 12 hours or as long as 10 days. Horses that have made it through the first 5 days are more likely to survive. Those animals treated in a hospital setting are likely to have the best outcome as the role of supportive therapy is vital.

SYMPTOMS IN HORSES INCLUDE:

- depression
- muscle weakness/tremors
- inability to stand
- loss of appetite
- increased heart and respiration rate
- choke

- depression/lethargy
- sweating
- colic
- extremely low head carriage
- fast or irregular heart beat
- dark red urine and mucous membranes (eg gums).

The number of donkeys diagnosed with this condition has been very low and therefore it is not clear whether donkeys would display the same clinical signs as horses.

SEASONALITY

High winds can carry the seeds far from the tree, as can streams and run off water. Very wet conditions may also release the toxin from the seeds into the surrounding land. Donkey owners need to be particularly vigilant in the autumn as seeds can even be found in pastures not necessarily containing sycamore trees. Extreme weather at other times of year may also be of significance. Cases have been seen to rise in the springtime as seedlings start to germinate.

TIPS FOR DONKEY OWNERS

- Ensure adequate food sources are available (further advice available from the Research Dept).
- Fence off around sycamore trees but be aware that seeds may travel further than expected.
- Inspect fields daily and remove any seeds/leaves.
- Ensure water sources are keep clean and fence off any ponds or streams that may have been contaminated.
- Remove young tree saplings.
- Youngsters are thought to be more susceptible.
- Check your animals twice daily and contact a vet immediately if any abnormal signs are seen.
- Ensure all people caring for your animals are aware of the dangers and symptoms.
- If one of your animals shows signs of AM remove all others from the grazing immediately.
- Ensure that you have insurance that covers veterinary fees.

PASTURE MANAGEMENT

Poor pasture management, high stocking densities and poor provision of safe food sources are often major risk factors in the development of many kinds of poisoning in horses, donkeys and mules. Hungry animals will explore alternative food sources and eat plants that they would normally reject. Once eaten, animals often get a taste for many plants and seeds which we know are toxic such as bitter acorns. Prior to winter it is important to ensure a steady supply of straw and hay/haylage is available to avoid your donkeys looking elsewhere to satisfy their appetites.

We would not recommend removing your donkeys from pasture altogether, but be especially careful choosing grazing for 'at risk' animals such as the very young or old, and those who are ill or convalescing as they will be more susceptible to and less able to cope with AM.

Sycamore has traditionally been used as a source of shelter/browse for horses and donkeys, and there are undoubtedly many situations where equids and sycamores get along just fine. Cut sycamore logs (minus any leaves/seeds) are still safe to be given as environmental enrichment.

The major risk factor is thought to be an abundance of seeds/ leaves on the ground together with a lack of suitable forage.

OTHER INFORMATION

The Donkey Sanctuary has more information available on other poisonous plants and trees (see 'poisonous plants' factsheet) and also on providing safe browsing for donkeys (see 'safe trees and shrubs for donkeys' factsheet).

If you need further advice or information please do not hesitate to contact us on **01395 578222** or by email **nutrition@thedonkeysanctuary.org.uk**