Equine Atypical Myopathy

Equine atypical myopathy (EAM), also known as atypical myoglobinuria, is a frequently fatal condition affecting grazing horses that has been linked to the toxins in sycamore seeds. It occurs during the autumn and/or spring months, frequently after a period of wet and windy or cold weather. Breeders should be aware that young horses and foals seem to be particularly susceptible to EAM.

This autumn, there has been a significant increase in reported cases of EAM across the UK. In October we saw a sudden increase in the number of cases that were admitted for treatment at Rossdales Equine Hospital in October, with admissions continuing into early November. Symptoms of the disease need to be recognised quickly and veterinary assistance sought immediately in order to achieve the best possible chance of recovery for horses and ponies that are affected.

By Emily Haggett BVSc, DipACVIM, MRCVS, Rossdales Equine Hospital, Newmarket

The disease
The condition was first recognised in 1984 and, since then, cases have been reported in a number of countries across Northern Europe and in the USA. Last year, a study published in the Equine Veterinary Journal showed that the ingestion of a toxin called ‘Hypoglycin A’, which is found in the seeds of the Acer pseudoplatanus tree - commonly known in Europe as the sycamore - is the likely cause of the disease. Other trees of the Acer family may also be implicated, with the box elder tree being responsible for outbreaks of a very similar disorder that is prevalent in Midwestern USA and Eastern Canada. Incidences tend to occur repeatedly in the autumn and in the spring following large autumnal outbreaks. Horses that develop EAM are usually kept in sparse pastures with an accumulation of dead leaves, dead wood and trees in or around the pasture and are often not fed any supplementary hay or feed.

During the autumn months, the levels of the toxin in the seeds are thought to increase, which may explain why the disease has such a seasonal occurrence. The toxin causes severe damage to the horse’s muscles, which causes recumbency, weakness and difficulty breathing. Unfortunately, the disease has a poor prognosis for recovery. It is thought that the seeds have been particularly abundant this year due to a warm summer, followed by a spell of windy weather that has dispersed them across paddocks. While the seeds may not be directly palatable, horses grazing on poor quality pasture may ingest considerable numbers of them. The recent surge in cases may become worse through the winter months as access to grass is further limited.

How do you recognise EAM?
Early signs of the disease include lethargy or dullness and mild weakness. This usually progresses to signs of mild stiffness, difficulty swallowing and increased periods of time lying down. In severe cases, horses are often found lying down and unable to get up. Urine from horses with the disease becomes a dark red colour due to excretion of pigments from the damaged muscle.

What can you do to prevent the disease?
It is extremely important to prevent horses from eating seeds from sycamore trees. Practical ways that you can do this include:

- Fencing off areas of pasture with high numbers of sycamore seeds
- Picking up/hoovering up sycamore seeds
- Where horses are grazing in the vicinity of sycamore trees, it is imperative that they are provided with sufficient supplementary feed (hay or haylage and carbohydrate feed), particularly where pasture is poor. This will help to discourage horses from ingesting the seeds (leaving wet hay on the ground also should be avoided).
- Turning horses out for shorter periods of time than normal

Treatment
If you suspect a case of EAM the first priority is to remove all horses from the pasture. Clinical cases should then be treated aggressively. The priorities of treatment include:

- Intravenous fluids to restore the circulation and protect the kidneys from the effects of the damaging muscle pigments

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Antioxidant medications and carnitine to try to encourage normal energy metabolism in muscle cells.

- Pain relief
- Correction of metabolic disturbances
- Lots of nursing care

**Prognosis**

Sadly, even with aggressive treatment the survival rate for affected horses is only 20-30%. Once horses become recumbent and unable to rise the prognosis for recovery is very poor. Horses that are mildly affected can make a full recovery from the disease.

**Suspect a case of EAM?**

If you suspect a case of EAM, call your vet immediately. Some horses can recover with intensive care but early treatment is essential. You should also immediately remove other horses from the affected pasture.

Further information can be found on the following website www.myopathieatypique.fr/en/la-maladie

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