

Atypical Myopathy



Atypical or sycamore myopathy is an uncommon, sudden onset, severe muscle disease, which is rapidly fatal in about 75% of cases. This disease is seen most commonly in the autumn, in horses and ponies kept at pasture and is associated with the ingestion of sycamore seeds.

It should not be confused with exertional rhabdomyolysis (ERM) commonly known as tying up which is a relatively common muscle condition occurring during or shortly after exercise.

History

Atypical myopathy is most common in the autumn following inclement weather and in the spring after an autumn with a lot of outbreaks.

Young adults are most susceptible. Cases of atypical myopathy are typically found standing or recumbent in the paddock, with no history of recent exercise that day.

Affected animals are often found grazing relatively bare paddocks with no additional feed. Dead leaf litter with surrounding trees is often evident. Research has found an association between the disease and a toxin found in sycamore seeds.

Clinical signs

Clinical signs result from severe muscle damage, particularly affecting the leg and respiratory muscles but also the heart. Patients can progress to developing organ failure. Affected animals are extremely reluctant to move, or unable to stand up and may have difficulty raising their head.

Walking is very difficult or impossible and cases often appear very anxious and distressed. They may sweat profusely, with muscle tremors and have an increased breathing and heart rate. Patients unable to stand may be hypothermic.

DIAGNOSIS

This is usually suspected from the history of a patient having difficulty standing or moving whilst out at grass in autumn, with no recent exercise.

Blood tests reveal very high muscle breakdown product (enzyme) levels and may also show signs of organ damage.

Urine samples can also be tested for muscle breakdown products, which makes it appear dark red.

URINE APPEARS DARK RED



KEY POINTS:

- affects horses at grass, causing a condition similar to severe tying up;
- is an **emergency** condition and requires immediate intensive care treatment;
- has recently been associated with a toxin present in **sycamore seeds**;
- has a low survival rate of around only 25%.

Treatment

Cases need emergency intensive care and prompt treatment to maximise the chance of survival. Patients that cannot stand are unlikely to survive. Cases should be moved to a nearby stable for treatment if possible, or to a veterinary clinic, preferably a minimal distance away.

Intravenous fluid therapy including glucose supplementation is essential to provide energy, support the circulation and help flush out the muscle breakdown products (muscle enzymes), which are toxic to organs.

Although muscle weakness is the main issue, atypical myopathy can also cause muscle pain, so reasonably strong painkillers are often used in the treatment.

Injectable multivitamin supplementation using vitamins B and E and Selenium have been shown to improve survival.

Intensive nursing care of patients is essential, particularly those that cannot stand. Patients need to be kept warm using rugs or blankets and must have plenty of warm bedding/padding around and under them. To avoid further muscle damage they should also be turned every few hours.

Patients should be encouraged to eat fresh food and to drink water, ensuring that those having difficulty using their neck muscles have their heads supported and can access their feed and water buckets. Regular grooming should also be carried out. Recumbent patients should have soiled bedding replaced regularly.



SURVIVAL RATE

Due to the speed with which severe muscle damage and respiratory failure occurs, only about 20-25% of cases survive. Those cases which can remain standing, continue to eat and do not develop hypothermia or signs of breathing difficulty are more likely to survive.

Cases that survive for 10 days are more likely to recover.

HERD MANAGEMENT

Other horses grazing the same paddock at the time of the outbreak should be examined by a veterinary surgeon and, ideally, blood tested, as milder cases are often detected and can be treated promptly.

Animals should be temporarily removed from the paddock and/or given supplementary feed, keeping it off the ground.

PREVENTION

Provide supplementary forage in nets or feed bowls for grazing animals and reduce stocking density during high risk periods (autumn during wet/windy weather).

Clear fallen sycamore leaves and seeds or fence off areas around the trees.

Limit grazing time on pastures with previous cases during high risk periods i.e. autumn and spring.



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