Atypical Myopathy

The disease:
Equine atypical myopathy is a life threatening condition seen in grazing horses in the spring and autumn. It is currently rare in the UK and at Scarsdale we have not yet seen a case. However, numerous cases have been seen in northern Europe and outbreaks have been recently reported in the south-west of England. This means that we may see this disease in the future and need you to be able to recognise the early signs and also how we can help prevent it.

Clinical signs
Clinical signs have a sudden onset and can be rapidly fatal with a survival rate of only 10-25%. When seen, the rare early signs of the disease consist of lethargy, decreased appetite, signs of colic, stiffness or lameness. These signs progress very quickly and horses develop severe, generalized weakness and are frequently found unable to rise. Sometimes they are found dead in their field without showing any previous signs.

Horses still able to walk show muscle weakness or stiffness unrelated to excessive or unusual exercise. They may have difficulty getting to their feet or staying standing. Muscle tremors may also be seen. Horses suffering from atypical myopathy are often depressed, however affected horses often still want to eat. It is important to check other horses present on the same pasture for stiffness, because it can be an announcing sign of atypical myopathy. Affected horses will void dark coloured urine. Collecting a urine sample will help us come to the correct diagnosis if you are concerned your horse might have atypical myopathy.

Affected horses gums are congested (abnormally red or purple). Taking the rectal temperature usually reveals hypothermia (less than 36°C, whereas normal is between 37 and 38°C in a healthy horse). This hypothermia is probably a consequence of the fact that the horse is laying on the pasture, not able to move or get up, often in the cold (most of the cases arrive in autumn or spring, during cold nights). Affected horses often show progressive difficulty in breathing over time. The diagnosis is confirmed on the basis of clinical signs and laboratory tests.

What causes atypical myopathy?
Little is known about the cause of equine atypical myopathy and research is ongoing. It is now thought that it may be caused by the ingestion of a pasture-derived clostridial toxin and, in this respect may be similar to grass sickness.

How can we try to prevent atypical myopathy?
Studies have identified factors that increase the risk of a horse developing the condition. Young horses (less than 3 years old) are more frequently affected. Horses in poor body condition and horses that have not been vaccinated or dewormed are also at increased risk.

Restricting access to pasture when cases of atypical myopathy occur has been shown to prevent further cases. Supplementary feeding to keep the horse in good body condition especially during the high risk seasons helps reduce the risk of the disease. Providing clean drinking water and stopping access to natural water supplies such as ponds and streams has also been shown to reduce the risk.
Pastures at risk:
- Pasture with a history of previous death(s) of horses
- Pasture with bare grassland
- Pastures where a stream/river flows
- Pastures with accumulations of a lot of dead leaves
- Feeding hay on the ground in the pasture during autumn

Preventive measures:
- Removal of dead leaves
- Give only access to dry and lush pastures during the seasons at risk (ie autumn and spring)
- Remove any potential toxic plants and/or moulds
- Regularly remove manure from pasture
- Regular deworming and vaccination

What to do if you suspect a case?
- **Call us** as soon as you see signs compatible with the disease (see above)
- **Try not to move or stress the horse,** as any movement will make the muscle damage worse. Ideally slowly move your horse to a stable with thick bedding where your horse can be treated in comfort
- Try to take your horses temperature and if cold, try to rug up and warm your horse
- Offer your horse small amounts of warm wet feed and water
- Try to collect a urine sample if your horse urinates

**Microscopic picture of a muscle tissue section taken at postmortem examination from a horse that died with signs of EAM, showing muscle fibre structure disruption and degeneration (green arrows) and signs of muscle fibre swelling and loss of striation (yellow arrows)**

**Treatment**
There is no treatment to fight the causal agent (as it is not recognised yet), however symptomatic treatment will decrease the symptoms and make the horse more comfortable. This involves intensive intravenous fluid therapy, anti-inflammatory medication and nursing. This will help to stop muscle destruction, correct any electrolyte imbalances, provide rehydration, support renal function and prevent complications. Where there has been a positive diagnosis, other horses in the same paddock should be moved preferably into stables, or if not possible onto a different pasture.

**The Atypical Myopathy Alert Group of Liege University is currently conducting an epidemiological study. For more information please go to [www.myopathieatypique.fr](http://www.myopathieatypique.fr)**