

Equine Exertional Rhabdomyolysis

Exertional rhabdomyolysis, also known as 'tying-up' or 'azoturia' is an extremely painful muscle condition of horses, usually occurring during or immediately after exercise.



If the condition is not recognised early, and the horse not treated and managed appropriately then extensive muscle damage can be done, and proteins released from these damaged muscle cells can cause serious kidney disease. Whilst the disease is most commonly seen in racehorses and competition horses, any horse or pony could be affected. Some horses may suffer recurrent bouts or have chronic problems, others may have sub-clinical disease and present with poor performance as the primary complaint.

Causes:

Classically the disease is seen in horses that have been fed their normal high carbohydrate diet despite a period of rest – indeed, the condition was known as 'Monday Morning Disease' as working horses used to display signs when brought out of their boxes after their rest day. However, the following factors may also contribute to the disease process:

- Excessive exercise for level of fitness
- Hormone imbalances
- Genetics
- Electrolyte imbalances
- Viral infection
- Dehydration
- Underlying muscle disorders such as polysaccharide storage myopathy (PSSM)

Clinical signs:

Signs of exertional rhabdomyolysis include:

- Reluctance to move
- Stiff gait
- Muscles may feel hard and swollen, especially over the hindquarters
- Sweating
- Increased heart and respiratory rate
- Distress or even colic signs
- Dehydration
- Dark red urine (in severe cases)
- Recumbancy (in very severe cases)
- Poor performance (mild or recurrent cases)



Diagnosis:

In many cases the history and presenting signs may be sufficient to make a provisional diagnosis. A blood sample may be taken to assess levels of muscle enzymes (creatinine kinase (CK), aspartate transaminase (AST) and lactate dehydrogenase (LDH) are the main enzymes assessed) – not only does this give an indication of how severe the disease is, but repeat blood samples can also be used for monitoring purposes, to assess when the horse is recovered and exercise can be reintroduced.

Blood sampling can also be useful to detect much milder episodes, or even sub-clinical disease where the main sign may be poor performance. In some recurrent or chronic cases a muscle biopsy may be recommended in order to rule out other underlying causes such as polysaccharide storage myopathies (PSSM).

Treatment and Management:

If you suspect that your horse has tied up then it is very important not to exercise it further as this may cause more severe muscle damage. If possible, organise transport back to your stable, and arrange a veterinary visit.

Immediate treatment by your vet is likely to involve pain relief, and possibly a vasodilator such as acepromazine (ACP) to aid blood flow to the damaged muscles. Sedatives or muscle relaxants may also be administered. In some cases oral fluids and electrolytes are given to aid rehydration. In very severe cases where the horse is very dehydrated then intravenous fluids may be necessary to prevent serious kidney damage.

Further management depends on the individual horses response to treatment and the suspected initial cause, but is likely to involve a period of box rest or small paddock turnout followed by a gradual reintroduction of exercise; blood samples may be taken at regular intervals to ensure that the horse is not being over exerted and no further muscle damage is being done.

Any underlying conditions should also be treated accordingly.

Prevention:

Treatment of the suspected underlying cause is obviously necessary, however several management changes can be made to help decrease the chance of reoccurrence. These include:

- Make any diet changes gradually
- Feed according to level of work being done
- Reduce feed accordingly if a period of rest is necessary
- Decrease or stop feeding carbohydrates and replace with oils if more energy is required
- Consider feeding a vitamin/mineral supplement, and give additional electrolytes during hot weather or if the horse is sweating a lot
- Make any increases to exercise level gradually to allow muscles time to adjust
- Try to work horses prone to the condition every day
- In some horses displaying recurrent signs treatment with drugs that modify release of calcium from the muscle cells may be beneficial

Please contact a member of our equine veterinary team on 01332 294929 if you require any further information or if you think your horse may be showing signs of the condition.

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