Equine Grass Sickness

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duine Grass Sickness (EGS) is a devastating disease that affects horses, ponies and donkeys. Damage to the nervous system is caused by a bacteria called Clostridium perfringens. The bacteria are eaten in the soil and overgrow in the gut. Damage to the nervous system is usually fatal.

What causes Grass Sickness? Despite extensive and ongoing research, the exact cause of EGS is not completely understood. There is an increase of amount of evidence to support the theory that the disease is caused by a bacteria called Clostridium botulinum. The bacteria are eaten in the soil and overgrow in the gut. Damage to the nervous system is usually fatal.

Why do some horses and not others get EGS? EGS occurs sporadically and is more common in certain geographic areas. The disease is most prevalent in Scotland but has been reported in all areas of the UK. The disease affects only horses that have access to grass and occurs most commonly after horses have been exposed to anavine pasture. Young horses (2-7 years of age) are most commonly affected and the peak incidence is in the spring and early summer. Other risk factors include recent soil disturbances, sandy soil, soil with high nitrogen content, properties with high concentrations of horses, lack of supplemental feeding to horses at grass and a history of prior cases on the premises.

A week in brief...

Monday
The vet starts with the admission of a sick filly into the Neonatal Intensive Care Unit (NICU). Fred was born after a difficult foaling and the Equine Team was concerned that he was starved of oxygen during delivery. He is a horses old when he is admitted and is collapsed and unable to stand. The team sets to work trying to stabilize him, using a combination of oxygen, intravenous fluids, antibiotics and intensive nursing. It is discovered that she is severely anemic and has jaundiced from yellow blood. The horse is discharged with a month’s course of treatment with anti-seizure medications. Fred is having intermittent seizures and still anemia. He is treated with a continuous infusion of drugs to control his seizures and started on intravenous nutrition to help with restoration.

Tuesday
A 3-day-old filly, Fred, presents for signs of weakness. Blood tests show that she is severely anemic and has jaundice and yellow blood. The horse is discharged with a month’s course of treatment with anti-seizure medications. Fred is having intermittent seizures and still anemia. He is treated with a continuous infusion of drugs to control his seizures and started on intravenous nutrition to help with restoration.

Wednesday
Fred, a 3-day-old filly, presents for signs of weakness. Blood tests show that she is severely anemic and has jaundiced from yellow blood. The horse is discharged with a month’s course of treatment with anti-seizure medications. Fred is having intermittent seizures and still anemia. He is treated with a continuous infusion of drugs to control his seizures and started on intravenous nutrition to help with restoration.

Thursday
A 17-year-old mare is evaluated for signs of weight loss, weakness and a right eye. A very early evaluation of her chest show that she is showing signs of a stress pneumonia. Treatment with antibiotics is necessary for EGS. Antibiotics and anti-inflammatory medications is started. Fred is showing signs of intermittent signs of weakness and is very weak. Fred is discharged with a month’s course of treatment with anti-seizure medications. Fred is having intermittent seizures and still anemia. He is treated with a continuous infusion of drugs to control his seizures and started on intravenous nutrition to help with restoration.

Friday
A mare in late pregnancy comes in for an emergency case showing signs of colic. She is discharged with a severe anemia, which is corrected by the surgical team. Post-operatively she is fitted with a telemetry ECG (electrocardiogram) to monitor the horse’s heart rate closely. This helps to minimize the chances of the foal being born healthy. The mare is very comfortable after surgery and the foal’s heart rate is regular. Fred is showing signs of weakness and is no longer experiencing signs of pain. He is now able to stand up with support and is showing interest in his surroundings.

Further information can be found at www.grasssickness.org.uk

Eating is difficult due to paralysis of the muscles involved in swallowing and salivation occur. Pasty sweating and mucous membranes occur. In horses that are affected by the slowest form of the disease, inflammation of the nostrils leads to a ‘snoring’ noise whilst breathing.

Diagnosis
All horses with colic should be examined by a veterinary surgeon. In the acute form of the disease it is often very difficult to distinguish between EGS and other types of surgical colic and horses are often referred to an equine hospital. Although the disease is often suspected based on the clinical signs the horse is showing, confirmation of the disease is often more challenging. In many horses emergency surgery is necessary to distinguish between EGS and other types of colic. Diagnosis requires examination of a small biopsy of the intestine which is taken during surgery. In many cases, the horse can be dealt with the horse is standing and sedated, but often the procedure is carried out under a general anaesthetic. Other tests that can be helpful in diagnosing the condition include a swab of the oropharynx, using contrast to assess the horse’s ability to swallow, and the application of phenylephrine eye drops into the horse’s eyes.

Prevention
Unfortunately EGS is usually a fatal condition in horses. In fact, all horses that are diagnosed with the acute and subacute forms of the disease will die or have to be euthanased on humane grounds. Some horses diagnosed with the chronic form will survive but will need prolonged intensive nursing and veterinary care. However, their survival is largely determined by severity of the nerve damage and the associated complications. Consequentially, even with the best care, a horse may not survive.

Prevention of the disease is difficult because it is not easy to predict when the disease is likely to occur. General recommendations which may be helpful include gradual introduction onto new pastures, avoiding turnout in pastures after recent and disturbances, offering additional feed to your horse when turned out (especially when grass levels are low), and trying to avoid stressful events. If there has been a history of a case of grass sickness in suspect pasture then it is especially important that young horses are not suddenly turned out into these areas. Horses do seem to acquire some resistance to the disease and older horses are less commonly affected.

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