



FEEVA
Every horse matters

Equine Herpes Virus 1 (EHV 1)

Introduction

EHV 1 is an Alpha Herpes Virus. It is closely related to EHV subtypes 2 to 5 and affects horses of all ages.

Equine Herpes viruses share an ancient co-evolution with the Equidae family making them the most highly successful pathogens of domestic and wild equid populations.

EHV 1 infects a wide variety of diverse cell types, giving rise to three distinct clinical syndromes, respiratory, reproductive and neurological.

The virus can persist in recovered animals as latent infection. Latent infection forms a reservoir of transmissible disease which, through re-activation, results in infection of susceptible, in contact horses.

Stress is the most important cause of virus re-activation.

Transmission

Proximity to susceptible horses is essential for transmission as, though airborne, the virus is not known to travel distances in excess of 50 metres.

Although readily destroyed by common virucidal disinfectants it survives in the environment for up to 4 weeks. Recent studies have shown much longer survival times under favourable conditions.

Modes of transmission:

- Direct

Inhalation by in contacts of aerosolised virus in respiratory droplets and from aborted foetuses, foetal membranes and fluids.

- Indirect

Via personnel, especially on hands.

Via objects such as tack, buckets, equipment, vehicles and water troughs.

Clinical Syndromes

Respiratory Disease:

Mostly affects weanlings and yearlings. Clinical signs include pyrexia, nasal discharge, swollen lymph nodes, occasional cough and reduced appetite.

In adult horses the disease is often mild or inapparent.

Reproductive Syndrome:

Most commonly abortion but also includes delivery of weak foals with very high neonatal mortality due to rapidly progressive lower respiratory disease.

Abortion usually occurs within the last one third of pregnancy and without any prior respiratory signs. The process happens quickly and without warning signs. The foetus is most commonly expelled within the amnion.

The foetus, foetal membranes and fluids are highly infectious and can give rise to 'abortion storms' in paddock companions.

Neurological Disease:

Equine Herpes Myeloencephalopathy (EHM) is uncommon and sporadic. Frequently the only premonitory sign is pyrexia. Clinical disease usually appears 6 to 10 days after infection but this may be as short as 1 day.

Severity varies from mild ataxia to complete paralysis.

Affected horses can be contagious so biosecurity measures should be observed for at least 28 days post resolution of clinical signs.

The prognosis for non recumbent horses is favorable but poor for recumbent animals

Diagnosis of EHV 1

- Clinical signs including temperature.
- PCR of nasopharyngeal swabs.
- PCR of whole blood.
- Serology: paired samples 10 to 14 days apart showing a rising titre.

Prevention and Control

Goals of prevention and control:

1. To ensure that only healthy horses meet other healthy horses.
2. To stop entry of the disease on to a premises.
3. To limit disease spread if EHV 1 has entered a premises.
4. To block spread from an infected premises to other premises.

Three pillars of prevention and control:

- Management
- Biosecurity
- Vaccination

Management:

Keep young stock separately from breeding stock.

In foal mares should be kept together in small groups.

Unvaccinated mares should not be mixed with vaccinated mares.

In foal mares should not be transported long distances in the last month of pregnancy.

Minimise stress during weaning, mixing, transport and veterinary procedures.

Biosecurity

Routine:

Isolate new arrivals for 21 days.

Ensure adequate ventilation in stables and barns.

Limit numbers of horses sharing a single airspace both at home and at competition.

Good hand hygiene practices.

Thorough cleansing and disinfection of vehicles, stables and water troughs.

Vaccination.

In Outbreaks:

Daily monitoring of all horses for clinical signs.

Twice daily temperature taking of all horses.

Laboratory testing of suspect animals.

Removal of clinical cases from the main group to separate isolation facilities.

Isolation of clinical cases for at least 28 days post resolution of clinical signs.

Vaccination

Does:

- Reduce viral shedding.
- Reduce challenge to in contacts.
- Safeguard against abortion storms.

Does not:

- Substitute for good management and biosecurity practices.
- Protect against EHM.
- Prevent sporadic abortion.

Commercial EHV vaccines are licensed as an aid to the management of respiratory disease and abortion.

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