



Equine Herpesvirus Myeloencephalopathy (EHM)

Disease Name: Equine Herpesvirus Myeloencephalopathy

Disease Type: EHM is a neurologic syndrome caused by the EHV-1 virus. While EHV-1 is common in equine populations, the neurologic form of disease is rare. In extremely rare cases, EHV-4 can also cause EHM.

Transmission: EHV-1 is spread from horse to horse through contact with nasal discharge or inhalation of aerosolized respiratory droplets. Horses can also contract the virus by coming into contact with contaminated surfaces such as stalls, water, feed, tack, and transport vehicles. Humans can spread the virus from horse to horse through contaminated hands, clothing and equipment.

Frequency: Although EHV-1 and EHV-4 are a relatively common cause of mild respiratory disease (also called equine rhinopneumonitis), EHM, the neurologic form of EHV infection, is rare. It is poorly understood why this virus develops into neurologic disease in only some horses.

Incubation period: Ranges from 2-10 days. Horses can shed the virus during the incubation period, before they develop clinical signs.

Carrier status: Infected horses become lifelong carriers and can intermittently shed the virus even when showing no clinical signs. It is thought that most horses become infected with EHV early in life. While horses with EHM can be very contagious during an active outbreak situation, there are no documented cases of EHM horses causing additional cases of EHM after they have recovered and have been cleared by testing, quarantine, or both.

Latency: The virus can remain latent for the lifespan of the horse. Reactivation and viral shedding can occur periodically, especially during stressful events such as travel, illness, etc.

Severity: EHM is a life-threatening condition. Horses that are unable to stand may have lower survival rates while those that survive may have residual neurologic deficits.

Clinical signs:

- Fever may be intermittent throughout the course of disease, and the absence of fever does not rule out EHM.
- Nasal discharge
- Lethargy
- Distal limb edema
- Incoordination
- Hind limb weakness
- Loss of tail tone or bladder tone (urine dribbling or inability to urinate)
- Dog sitting position
- Leaning against a fence or wall to maintain balance
- Recumbency (inability to rise)



Diagnosis: EHV-1 is diagnosed by PCR testing of nasal swab and whole blood samples. Horses that test positive for EHV-1 and have neurologic signs are considered positive for EHM.

Treatment: Supportive care and rest. Non-steroidal anti-inflammatory medications, such as phenylbutazone (bute) or flunixin meglumine (banamine) are used to control fever and improve appetite. Antivirals, heparin, aspirin, and intense supportive care (urinary catheterization, sling, etc) are also often utilized for EHM cases.

Prognosis: Prognosis for horses with EHM is guarded and dependent on severity of clinical signs. EHM outbreaks have reported survival rates of up to 75%. Horses that survive may or may not have residual neurologic deficits.

Prevention: There is currently no vaccine labeled for the prevention of the neurologic form (EHM). Management practices for preventing EHV-related disease include maintaining current vaccinations on all horses on the property, practicing biosecurity while traveling and showing, and quarantining any new horses (or horses returning to a farm after travel) for at least 21 days before integration into the farm herd. Horses at shows should have their temperatures monitored twice daily.

Biosecurity: Biosecurity practices for EHV focus on minimizing horse-horse transmission through aerosol particles from nasal discharge or through contaminated surfaces including people, clothing, feed and water, implements, and stalls. This includes extensive disinfection of surfaces and equipment that come in contact with infected horses, as well as isolation of any horse that tests positive on nasal swab or blood.