Equine Herpesvirus (EHV-1 and EHV-4)

Disease Name: Equine Herpesvirus 1 and Equine Herpesvirus 4

Disease Type: Viral

Transmission: EHV is spread from horse to horse through contact with nasal discharge or spread as aerosol 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: EHV-1 and EHV-4 are common causes of mild respiratory disease in foals and young horses and EHV-4 occasionally causes abortion in mares. Equine Herpesvirus Myeloencephalitis (EHM), the neurologic form of EHV-1, is comparatively rare.

Incubation period: Ranges from 2 to 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.

Shedding period: Varies by horse and strain. Horses with clinical signs (nasal discharge, abortion, neurologic signs) should be considered contagious until cleared by their veterinarian through 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: Highly variable; mild signs of respiratory illness to abortion to severe neurologic disease

Clinical signs:

- Fever
- Nasal discharge
- Enlarged mandibular and/or submandibular lymph nodes
- Lethargy
- Late-term abortion (may occur up to two months following infection)
- Foal death in first 48 hours of life (rare)
- Neurologic disease: incoordination, urine dribbling, inability to stand

Diagnosis: EHV-1 and EHV-4 are diagnosed by PCR testing of nasal swab and whole blood samples.

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 and more aggressive therapies are used for EHM cases.

Prognosis: Although infection with herpesvirus is lifelong, most horses make a full clinical recovery from the respiratory form in 1-2 weeks. Horses with EHM may take longer to recover and neurological signs may never fully resolve.

Prevention: Vaccinations are available for prevention of the respiratory and abortive form of EHV-1 and EHV-4. There is currently no vaccine labeled for the prevention of the neurologic form (EHM). Management practices for preventing EHV-related disease includes 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. Avoiding co-mingling of horses in different age groups (e.g. broodmare with yearlings) is also helpful to reduce EHV transmission. Horses should have their temperatures monitored twice daily, particularly in higher risk settings like travel or show.

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.