EHV-1/EHM Horse Owner Information

Overview

Equine Herpes Virus-1 (EHV-1) is a virus that is widespread in the environment and is found in equine populations all over the world. EHV-1 infection in horses can cause respiratory disease, abortion in pregnant mares, foal death and neurological disease, which can be fatal. Horses are frequently exposed to the virus at a young age with no serious side effects. It is unknown what causes some horses to develop the serious neurological form of the disease and not others.

The neurological form of EHV-1 is known as Equine Herpes Myeloencephalopathy (EHM). When the EHV-1 virus damages blood vessels in the brain and spinal cord, this causes the neurological symptoms consistent with the disease. EHM is most often due to the neuropathogenic strain of EHV-1 (a mutation of the wild type virus), but may occasionally be caused by the non-neuropathogenic (wild type) strain.

EHV-1 is easily spread and typically has an incubation period ranging from 2-10 days. Shedding of the virus in respiratory secretions generally occurs for 7-10 days, but may persist longer in clinically infected horses.

Transmission

EHV-1 is spread through direct horse to horse contact, indirectly through contact with objects contaminated with the virus such as clothing, human hands, tack, trailers, feed/water buckets and grooming equipment as well as by aerosolized respiratory secretions. Since the size of the virus limits airborne transmission to distances of 30 feet or less, direct and indirect contact are the most important routes of transmission.

Reportable Disease Alert

Equine Herpes Myeloencephalopathy (EHM) is a reportable disease in the State of Maine according to Sec 32. 7 M.R.S.A. §1801 and 01-001 Chapter 206: Prevention and Control of Certain Diseases of Domestic Animals and Poultry. Diseases or pathogens must be reported to the Maine Department of Agriculture, Division of Animal Health.

Horses infected with EHV-1 and horses incubating the virus, shed it via nasal secretions. Horses with severe clinical signs consistent with the neurologic form most often shed large viral loads in nasal secretions and present the greatest risk for disease spread.

Clinical Signs

Clinical signs of EHM in horses may include:

- Fever of 101.5°F or greater (fever most often precedes neurologic signs)
- Nasal discharge
- Incoordination
- Hindquarter weakness
- Recumbency
- Lethargy
- Urine dribbling
- Diminished tail tone
Consult your veterinarian if your horse exhibits any of these signs.

**Diagnosis of EHM**

Nasal swabs and whole blood are collected from the symptomatic horse by a veterinarian and are essential for detection of the virus. Recent advancements in EHV-1 diagnostic testing enable laboratories to differentiate the non-neuropathic and neuropathic strains of EHV-1.

**Vaccination**

Currently, there is not a licensed EHV-1 vaccine with a label claim for protection against the neurological strain of EHV-1. However, vaccination against EHV-1 may limit the amount of virus shed in nasal secretions and the dissemination of infection. Work with your veterinarian to determine if and what type of vaccine regimen is best for your horse(s).

**Prevention**

Practicing good biosecurity measures is the best way to prevent the spread of EHV-1. Here is a list of biosecurity measures that should be implemented and enforced:

- Isolate any suspect, exposed or confirmed EHV-1/EHM horses.
- Restrict access to isolation area.
- Wear protective clothing including coveralls, rubber boots or plastic boot covers when entering a stall or coming in contact with an EHV-1/EHM suspect, exposed or confirmed positive horse. All protective clothing should be disposed of or washed with hot water before contacting other horses.
- Use foot baths with disinfectants at entry and exit doors to barns and stalls. Change foot bath solutions frequently since the presence of organic material inactivates many disinfectants.
- Wear disposable gloves while handling infected animals. Thoroughly wash with soap and water or use hand sanitizer between contact with horses.
- Always handle healthy horses first and sick horses last.
- Use separate grooming, feeding and handling equipment for each horse.

**Disinfection**

Herpes viruses are susceptible to many disinfectants. A 1:10 dilution of bleach in water is effective against EHV-1. Both alcohol and bleach disinfectants are inactivated by organic matter, such as manure and soil. Therefore, all areas must be thoroughly cleaned of organic matter prior to use of these products. Use soap or detergent and water to clean the environment first before applying a disinfectant. In barn environments where organic material cannot be completely eliminated, it is advisable to use a disinfectant that retains some activity in the presence of organic matter such as an accelerated hydrogen peroxide product such as Virkon. Be sure to follow the manufacturer’s recommendations and the label instructions for all disinfectants.