Equine Herpesvirus "Rhino" Respiratory Form

Often referred to as "rhino," the virus has different subtypes. EHV-1 is the most prevalent concern in horse populations not only because its respiratory disease is more virulent than EHV-4, but also because it is incriminated in causing viral abortion or neurologic disease (myeloencephalopathy). A mare may show no signs of disease, yet virus may invade the placenta and fetus. Most EHV-1 abortions occur in the last half of pregnancy, particularly the last trimester.

Symptoms

Initially, infection with herpesvirus (EHV-1) produces mild respiratory signs of watery, nasal discharge, fever (as high as 106° F or 41° C), and cough. There may be pinpoint hemorrhages on the mucous membranes. Some horses may also develop edema, swelling of the limbs or abdomen. After several days, the clear nasal discharge turns progressively thicker leaving a crust around the nostrils. The viremic phase lasts from 7 to 21 days, and during this time virus-infected cells have the potential to spread to other organs, such as a pregnant uterus and fetus to elicit abortion, the central nervous system to elicit myeloencephalitis. Typically, a horse that develops viral abortion or viral neurologic disease will have mild respiratory disease and/or fever in the two weeks preceding clinical evidence of reproductive or neurologic disease. Herpesvirus may be present in as many as 50 percent of adult horses, maintaining its presence in its hideout place within the trigeminal nerve of the face or within specialized white blood cells of the lymphatic system.

During stressful periods associated with training, competition, transport, management changes, or illness, high levels of circulating corticosteroids suppress a host's normal defense mechanisms. Poor nutrition, a heavy parasite load, overcrowding, and rigorous climatic events are other stressors that adversely affect a horse's immune defenses. It is during stress periods that latent virus is reactivated and shed into the nasal secretions. A horse may appear clinically normal yet he serves as a silent shedder.

Transmission maintains itself within a horse population in several ways:

- Passage from a latently-infected mare to her foal
- Persistence of infection in a latently-infected youngster into adult life
- Reactivation of latent virus to pass from horse to horse of any age

Most available herpesvirus vaccines target both EHV-1 and the less worrisome strain of EHV-4. An adult horse should receive boosters every 3 to 6 months, the frequency dependent on the risk of exposure and the risk of stress-related travel and competition. To protect against viral abortion, pregnant mares should receive EHV-1 vaccines prior to breeding and at 5, 7, and 9 months of pregnancy, using rhinopneumonitis vaccine specifically labeled for pregnant mares.