EQUINE INFECTIOUS ANEMIA

EQUINE INFECTIOUS ANEMIA IS A SERIOUS DISEASE THAT THREATENS THE WORLD'S HORSE POPULATION. DESPITE TESTING AND MEASURES TO ERADICATE THE DISEASE, APPROXIMATELY 2000 NEW CASES ARE IDENTIFIED EACH YEAR IN THE U.S.

There is no cure for EIA. Although most infected horses show no symptoms, they remain infectious for life, endangering the health of other horses. For this reason, the United States Department of Agriculture (USDA) and state animal health regulatory agencies require euthanasia or strict lifelong quarantine for horses testing positive for EIA.

EIA EXPLAINED

Equine infectious anemia is a viral disease that affects the horse's immune system. The virus reproduces in blood cells and circulates throughout the body. The horse's immune system, via antibodies, attacks and destroys the infected red blood cells and circulates throughout the body. The horse's immune system, via antibodies, attacks and destroys the infected red blood cells. The reduced blood count causes anemia, and associated inflammation can damage vital organ, such as the liver. Because the horse's immune system is impaired, the horse may also become susceptible to secondary infections, such as bronchopneumonia. EIA-infected horses can die from the virus or from related secondary infections.

EIA generally has three forms:

1. **Acute**, during which the virus is active, multiplying and harming the immune system and other organ systems.
2. **Chronic**, during which the animal may vacillate between remission and disease states. The horse may be thin or in poor body condition, and may suffer recurring bouts of clinical signs, as seen in the acute phase.
3. **Inapparent**, during which the horse carries the virus but shows no apparent symptoms. Stress or disease may bring on an acute episode.

TRANSMISSION

EIA is transmitted by blood. This transmission can occur via blood-sucking insects, such as horse flies, deer flies, and mosquitoes. The virus is carried in the residual blood on the insect's mouthparts as it travels from one host to the next. Humans can also spread EIA in much the same way by using a single needle on multiple horses. EIA can also be passed from mare to foal in utero.

EIA is also called "swamp fever" because the disease has been associated with warm, wet regions. However, the disease is not limited by geography.

The top 10 states for the reporting year which ended in October, 1993, were (in order of incidence): Texas, Louisiana, Missouri, Minnesota, and Illinois. But EIA can occur anywhere there is a carrier and a vector to transmit it.

SYMPTOMS

EIA is difficult to diagnose because the symptoms vary from horse to horse and can mimic other diseases. Additionally, some individuals may demonstrate no obvious signs. Signs may include one or more of the following:

- Fever and/or sudden fluctuations in temperature (temperature may even exceed 105 degrees F)
- Depression
- Decreased appetite
- Fatigue or reduced stamina
- Rapid breathing
- Sweating
- Rapid weight loss
- Bloodshot eyes with watery discharge
- Swelling of legs, lower chest, and abdomen
- Weakness characterized by wobbly or rolling gait
- Pale or yellowish mucous membranes
- Irregular heartbeat and/or weak pulse
- Colic
- Abortion in mares

THE COGGINS TEST

The only way to accurately determine whether a horse is infected with the EIA virus is by a serum test. The most commonly used method is the Coggins test, also known as the agar gel immunodiffusion (AGID) test. The test was developed 25 years ago by veterinary researcher, Dr. Leroy Coggins. Each year more than a million horses are screened for EIA by this test. The test is consistently reliable and detects the presence of EIA-specific antibodies in the blood. A negative reading means there are no detectable antibodies at the time of testing. A positive reading indicates the horse is infected and a carrier of the virus.

Another EIA test in use is ELISA (enzyme-linked immunosorbet assay) offers an advantage in that results can be assessed more quickly, especially with the CELISA (competitive) test. However, ELISA may not be as accurate as the Coggins test. A positive ELISA reading is verified by a standard Coggins test.

FEDERAL & STATE REGULATIONS

The USDA requires that horses being imported from foreign countries test negative to the Coggins test, along with other tests. Within the U.S., each state drafts its own specific requirements regarding EIA and the movement of horses interstate, intrastate, and in change of ownership. Learn what is required in your state and states you will be visiting. Be aware that laboratory results take time, and plan to have your horse tested in time to get results before you must transport your horse.

By law, EIA is a reportable disease. All positive cases must be filed with the state veterinarians and the federal Animal and Plant Health Inspection Service (APHIS) office.

RISK FACTORS

There are management and geographic factors that put horses at greater risk for contracting EIA. These include:

- Close proximity to regions where EIA outbreaks have been identified.
- Stabling or pasture environments that have a steady influx of new horses, especially if negative Coggins certificates are not required.
- Exposure to horses at shows, sales, or events, especially where stringent health care regulations are not enforced, and verification of a current negative Coggins test is not required.
- Pasturing horses in swampy areas and in areas where all horses have not been regularly tested for EIA.

THE ONLY PROTECTION IS PREVENTION

There is no effective treatment for EIA. There is no vaccine to prevent it. There is no cure. However, good management can reduce the potential of infection. The following guidelines will help:

- Use disposable needles and syringes, one per horse, when administering vaccines and medications.
- Sterilize dental tools and other instruments before using them on another horse.
- Test all horses for EIA at least annually.
- Stable owners should require current negative Coggins certificates before introducing any new horses to the farm or ranch.
- New horses should be quarantined for 45 days and observed for any signs of illness, including elevated temperatures, before introducing them to the herd. They should be retested if exposure to EIA is suspected. This is also good advice to prevent *any* infectious diseases in in your herd.
- All stable areas should be kept clean, dry, and waste-free. Good pasture management techniques should also be practiced. Remove manure and provide adequate drainage to discourage breeding sites for pests.
- Horse show and event managers should require and verify current negative Coggins certificates for all horses entering the premises.

DIFFICULT CHOICES

If the worst should happen and your horse tests positive for EIA, your options are extremely limited. Federal and state health agencies, as well as the American Association of Equine Practitioners, support euthanasia as the most prudent option, albeit a difficult one.

Life long quarantine in a screened stall is another, less acceptable, alternative. EIA-positive horses will always pose an unnecessary health risk to other horses, whether or not they show signs of illness. Even in the best management situations, blood-sucking insects cannot be totally controlled or eliminated. The only way to eradicate the disease is to eliminate the carriers.

Horses testing positive for EIA are required by law to be permanently identified via branding or tattooing and to be quarantined. A new electronic implant is also being tested as a possible identification device. Transportation and housing are severely restricted. You should contact your state animal health agency for specific requirements.

Owners who choose quarantine must post signs clearly stating: "Quarantined: Equine Infectious Anemia" or "Swamp Fever." Horses should be quarantined at least 200 yards away from all other animals. A screened enclosure is best.

CONTINUED VIGILANCE NEEDED

Stopping the spread of EIA is everyone's responsibility. If you suspect a horse has EIA, call your veterinarian or state animal health agency immediately. They can assess the animal and initiate the required tests.

Owner compliance with Coggins testing and the destruction of most known reactors has aided in a marked decline in EIA cases in the last 20 years. Today fewer than 1 percent of the 1 million horses tested annually are found to be carriers. But with an estimated 6.6 million horses in the U.S., more widespread screening is needed. Even backyard horses that never leave the property will benefit.

By having your horse tested, you will be doing yourself and the entire equine industry a favor. The cost is minimal; the price well worth the peace of mind.