



Tularosa Equine Clinic

Why is Equine Infectious Anemia significant?

As horse owners, most of us are aware of the need for an annual Coggins test. But few people understand the significance of the disease that this test diagnoses. Equine Infectious Anemia (EIA) is an infectious viral disease of equids. It is caused by a lentivirus that was identified in France in 1843 and first diagnosed in the US in 1888. EIA is one of many diseases that cause fevers like influenza, EHV, encephalitis, etc. EIA is significant historically because it was the first equine disease proven to be caused by a “filterable virus” (it can survive special laboratory filtering and remain infectious).

Acute infections with EIA virus can cause severe, rapidly developing symptoms and may cause death within 2 to 3 weeks of infection. It can be the most difficult to diagnose because of the rapid onset and the initial fever may be short-lived. As these acute cases recover, they may continue to move within the population exposing more horses. 1 teaspoon (5ml) of blood from an acutely infected horse contains enough virus to infect 1 million horses.

If the horse survives the acute phase of the infection it may develop recurring clinical signs:

- * Fever - may rise to as high as 105 to 108°F and then drop for an unknown period of time until the next episode.
- * Petechia - these look like red pinpoint blotches on the mucous membranes of the mouth, vulva and penis.
- * Depression - the horse hangs its head low and appears listless
- * Unexplained weight loss
- * Dependent edema - swelling of all four lower limbs and along the belly.
- * Anemia - significant drop in the number of red blood cells, collected blood samples may appear thin pinkish or watery and the horse may develop an irregular heartbeat and jugular pulse.

The classic presentation of a horse with chronic EIA has lost condition (weight), is anorexic, is lethargic, has a low hematocrit/PCV and has decreased platelets, especially with a concurrent fever. 1/5 of a teaspoon (about 1ml) of blood from a chronically infected horse collected during a fever episode contains enough virus to infect 10,000 horses¹.

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The majority of positive horses, however, are inapparent carriers. They show no outward clinical symptoms and they serve as reservoirs of infection for extended periods of time. They have dramatically lower concentrations of virus such that 1 horsefly bite out of 6 million is likely to transmit the disease. Inapparent carriers may convert to acute or chronic forms due to significant stress, or other disease processes.

EIA is considered a classic blood borne infection that frequently may be transmitted by large biting insects (horse flies, deer flies) as well as contaminated needles and other mechanical means. Diagnosis is made by an agar-gel immunodiffusion (AGID) test for specific antibodies. This test was described in 1970 by Dr. Leroy Coggins. While other serologic tests have been defined and approved to diagnose EIA, the “Coggins” test remains the “gold-standard”.

Preventing the spread of EIA requires minimizing/eliminating contact of naive (uninfected) horses with secretions, excretions and blood of seropositive (“Coggins positive”) horses. Segregation of positives, reducing insect populations, using disposable syringes and needles, sterilized instruments, isolation of all new equids until they have been tested and obtaining official certificates of testing will help reduce the risk of infection. After multiple positives in racing Quarter Horses in California during 2014-2015, the disease still has the potential to spread undetected. This is why routine annual testing is a very important part of preventing the spread of EIA.

For more information: https://www.aphis.usda.gov/publications/animal_health/content/printable_version/fs_equine_infectious_anemia.pdf

1. USDA-APHIS Veterinary Services Equine Infectious Anemia Factsheet, 2008