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Equine Infectious Anemia

Definition

Equine infectious anemia (EIA), also known as swamp fever, is a viral infection of Equids (horses, ponies, donkeys, mules, and zebras) characterized by fever, lethargy, inappetence, anemia, and thrombocytopenia (low platelet count). Horses of all ages, breeds, and sex are susceptible. Horses infected with EIA are infected lifelong and can have recurrent episodes of clinical disease, however, many remain inapparent carriers with no symptoms. The prevalence of EIA within the United States is very low however tends to be more prevalent in the Gulf Coast states where there is a larger density of insect vectors. Horses are routinely screened for this viral infection by means of a coggins test named after the test developer, Dr. Leroy Coggins.

Clinical Signs

The majority of infected horses do not show any clinical signs. Horses who do develop symptoms can exhibit lethargy, muscle weakness, inappetence, depression, weight loss, fever, and petechial hemorrhages (small areas of bleeding under the skin).

Transmission

EIA is transmitted in blood and bodily fluids. Horses are most commonly infected by the bite of a horsefly or deerfly carrying the virus on their mouthparts. The fly picks up the virus from biting an infected horse, carries the viral particles on its mouthparts, then infects another horse upon biting them. Contaminated equipment and reusing needles can also serve to transmit the virus. Vertical transmission, from mare to foal, is also possible. EIA is not zoonotic, meaning it cannot be transmitted between species and does not pose a risk to human health.

Diagnosis

Inapparent carriers of the virus often have normal values on routine blood work. Horses displaying acute clinical signs of infection often develop thrombocytopenia (low platelet count) and mild anemia (low red blood cell count). In chronically diseased horses, the degree of anemia can be more profound. Testing performed at a USDA approved diagnostic laboratory is the way to confirm infection. A coggins test (agar gel immunodiffusion), ELISA, or western blot are all tests that look for antibody production to the virus indicating infection. Most commonly, when your veterinarian comes out to draw blood for a routine coggins, they are submitting it for AGID testing.

Treatment

Horses who test positive on the initial coggins test must be quarantined immediately at least 200 yards from other equids. A confirmatory test is then performed, and if the horse tests positive on that test as well, the horse must be euthanized or quarantined from all other horses for the remainder of its life.

Prevention

Unfortunately there is no EIA vaccine, however there are federal and state regulations in place to help prevent the spread of disease. All horses moving across state lines must have a negative EIA test result within the past 12 months. The same is true for all equids being sold, traded, or donated. Most events where horses are gathering, such as shows, require a negative coggins test within the past 12 months. Insecticides, not re-using needles, and overall good hygienic practices are further ways to help prevent the spread of EIA.