

Sleeping Sickness In Horses

Equine Encephalomyelitis

Equine encephalomyelitis (sleeping sickness) is diagnosed in South Carolina horses each year. It usually occurs as individual isolated cases but may become endemic in a small area, several counties, or the entire state. Most cases occur in late spring, summer, or fall.

CAUSE

Sleeping sickness in horses is caused by a virus that also infects people and birds. There are several types of the virus. **Group A viruses** include the Eastern strain found in the Eastern Coastal and Gulf States, the Western strain found in the Western and Central United States, and the Venezuelan strain found in Florida. The **Group B viruses** include the St. Louis strain, which is widely distributed in the United States. It affects people but does not cause sickness in horses. Eastern equine encephalomyelitis is the most common type in South Carolina.

TRANSMISSION

The disease is maintained by an insect-bird reservoir. It is transmitted to mammalian hosts by biting insects, principally mosquitoes of the *Aedes*, *Anopheles*, *Culex*, and *Culexeta* species. Susceptible birds include pheasants, chickens, ducks, turkeys, black-birds, pigeons, quail, and many others. Birds develop viremia (blood infection). They sometimes die, but they usually harbor the virus without showing disease signs.

People and horses are considered "dead end" or accidental hosts. They do not develop viremia so the disease is not transmitted from the infected person or horse to other mammals. With the possible exception of the Venezuelan type, people and horses do not transmit the disease among themselves by con-

tact or by mosquito transmission. New cases result from transmission from bird to mosquito to a person or horse.

SIGNS

Sleeping sickness affects the central nervous system. In horses, this results in nervousness, depression, impaired vision, walking into objects, reduced reflexes, fever, incoordination, grinding of the teeth, yawning, drowsiness, sleeping in the standing position, drooping lower lip, inability to swallow, inability to rise, lying on the side moving feet and legs in bicycling motion, paralysis, and death. Horses with mild cases recover in a few weeks. Those with severe cases usually die. The mortality rate in horses is 20 to 50 percent with the Western strain and over 90 percent with the Eastern type.

DIAGNOSIS

Encephalomyelitis is confirmed by virus neutralization or hemagglutination inhibition tests of paired serum samples compared during the acute and convalescent stages. With the Eastern type, antibodies develop in 2 to 3 days. Longer periods are desirable for comparison of serum antibody titers. Veterinarians should be called for all cases. They should report all clinically diagnosed cases to the State Veterinarian, Livestock Poultry Health, by phone. Trapping of mosquitoes to make virus isolation is sometimes undertaken.

TREATMENT AND CONTROL

There is no specific treatment for the disease in horses. Good nursing care and supportive therapy are used.

Vaccination of horses for the disease is recommended annually in South Carolina. The effective duration of immunity is 6 months in horses. A booster vaccination is recommended when the mosquito season extends more than 6 months after the initial vaccination. A bivalent vaccine containing both Eastern and Western types is recommended. Two doses, 7 to 14 days apart, are needed to produce satisfactory immunity. Early spring is the preferred time to vaccinate for season-long protection. Revaccination each year is necessary. Horses can be vaccinated during an outbreak. Remember that 2 weeks are

required for development of immunity. Contact a practicing veterinarian for specific recommendations. Mosquito control is the best means of protecting people and horses against exposure. Horses should be sprayed with a suitable insecticide or kept in screened stalls. Wild or domesticated birds should be discouraged from roosting in the vicinity of horse barns.

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