

December 2010

Rabies Virus – Should You Vaccinate Your Horse?

Dr. Jessie Evans

Bend Equine Medical Center

Last month, three new cases of rabies infections in foxes were diagnosed in Josephine County. Two cases were found in Cave Junction and one was found in Merlin. As of December 2, 2010, 10 bats, 6 foxes, and 1 goat have been diagnosed with rabies in the state of Oregon this year.

Although rabies is an uncommon disease in horses, it should be included in a list of differential diagnoses for any horse showing neurologic signs. The reason it is important to consider the disease is because it is zoonotic, meaning it can be transferred from animals to humans—and it is fatal for both.

Rabies virus is transmitted by saliva-contaminated wounds. Exposure occurs through the bite of an infected (rabid) animal, typically a wildlife source such as raccoon, fox, skunk, or bat, though domestic cats, dogs, and other horses may also transmit the virus. Bites to horses occur most often on the muzzle, face, and lower limbs. The virus migrates via nerves to the brain where it initiates rapidly progressive, invariably fatal encephalitis. The incubation period for rabies (period of time from exposure to development of clinical signs) varies from 9 days to 1 year in horses. The large variation is due to difference in virus strain, host species, amount of virus inoculated, and proximity of inoculation site to the central nervous system.

Clinical signs of rabies in the horse are highly variable. There are three forms of classification of rabies-infected horses. Cerebral (furious) form presents as aggression, photophobia (fear of light), hydrophobia (fear of water), hypersensitivity, and muscle tremors. Brainstem or dumb form presents with depression, anorexia, circling, ataxia (drunk-like stagger), excessive salivation, facial paralysis, blindness, urinary incontinence, and flaccid tail. Paralytic or spinal form results in ascending (from tail to head) paralysis. The neurologic signs vary as the virus spreads to different areas of the nervous system. Death usually occurs within 5-10 days after onset of clinical signs.

The American Association of Equine Practitioners now recommends rabies as a core vaccination for horses. While the incidence of rabies in horses is low, the disease is invariably fatal and has considerable public health significance. The Oregon Health Authority also urges all residents to be sure that all their domestic and livestock animals are up to date on their rabies vaccinations.

Vaccination consists of a single primary dose and annual revaccination for adult horses. For foals, a primary series is implemented, consisting of a primary dose and a booster 4-6 weeks later. They can then be vaccinated annually. If a horse is exposed to a confirmed rabid animal and is unvaccinated, it is recommended that the horse be euthanized immediately. If the horse has been vaccinated, immediate revaccination is recommended, followed by observation for 45 days for development of clinical signs of rabies.