



Rabies in Horses

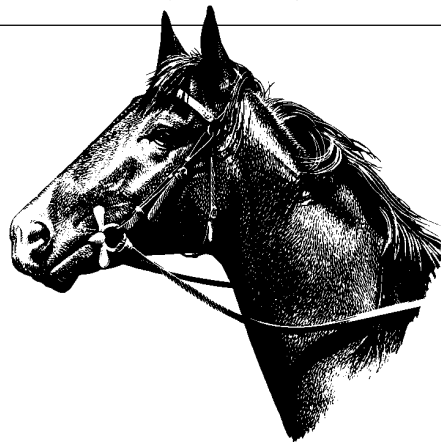
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History

Rabies in the horse is a relatively uncommon disease. In 1981, the number of rabies cases peaked in the horse industry at 88 and has leveled off to about 40 cases for the past few years. The incidence of rabies in domestic animals follows that of wildlife, which seems to follow a cycle of approximately eight to 10 years. Although rabies in horses is low (5 percent), the potential for human exposure makes it important to discuss its causes, diagnosis, treatment and control.

Causes

Rabies is a sporadic viral disease caused by a neurotropic rhabdovirus (a virus which affects the nervous system). Horses contract the virus from the saliva of an infected animal either through a bite or by the saliva contaminating an open wound. The skunk is the primary animal of focus in the wild. Rabid skunks are the primary way horses contract rabies. Skunks are nocturnal, so if one is seen during the day it should be suspected as being rabid. Horses are very curious, especially foals and yearlings, and will investigate wildlife roaming the pasture. This exposes them to bites on the nostrils or lips. The incubation period for the disease usually is two to six weeks, although sometimes it may take up to three months before symptoms appear. Foxes are a common carrier from New England through the Southeast and into Tennessee and



Kentucky. Raccoon rabies has been on the increase more recently in the states of Pennsylvania, Maryland, Tennessee and other southeastern states. Other carriers include insectivorous bats and unimmunized dogs and cats.

Clinical Signs

Diagnosing rabies proves difficult because of the wide range of clinical signs. Historically, descriptions of the initial symptoms such as "furious" and "paralytic or dumb" were used, but these can be misleading. The most important factor to remember is to think rabies first when dealing with unexplainable clinical signs. The most common sign of rabies is behavioral changes. The majority of horses initially are dull and depressed. A low-grade fever usually is present along with convulsions, increased sensitivity at the site of injury, lameness, gnawing the affected area and anorexia. Symptoms usually progress quickly over five to seven days resulting in recumbency and death. Often rabies

is not diagnosed upon the initial onset of symptoms, as the horse is still calm, alert and eating. Of great importance in recognizing rabies is the rapid progression of the disease. Because the neurological signs always progress rapidly with rabies, other possibilities should be considered if the clinical signs have not worsened after a period of five days.

Diagnosis

Since rabies typically is rare in horses, a veterinarian should attempt to rule out other diagnoses before diagnosing rabies. Other diseases which present clinical symptoms similar to rabies are tetanus, equine herpesvirus, the various causes of encephalomyelitis, botulism, lead poisoning, moldy corn poisoning, protozoal myelitis, and trauma to the brain or spinal cord.

Postmortem diagnosis can be made by submitting the intact head to a designated public health laboratory. In transit, the head should be refrigerated by wet ice but not frozen. Diagnosis can be performed accurately and rapidly within hours using the fluorescent antibody (FA) test to stain sections of the brain for the presence of rabies virus. A positive test means treatment should be started for anyone who has come in contact with the rabid animal. The FA test may be confirmed by mouse inoculation studies or isolation of the virus in tissue culture.

Treatment

At the present, there is no antiserum for the treatment of the rabies virus. Immediate cleansing of the affected wound area may prevent infection, but post-vaccination of the animal really is not useful as the horse will die before immunity has time to develop. In humans, there is a series of shots given after a suspect bite, but this must be done before the onset of symptoms occurs. With horses, rabies infection generally is not known until clinical signs appear. If a horse has been previously immunized, an immediate booster shot should be given. Strict quarantine and observation for six months are mandatory in all cases. If clinical symptoms develop, the horse should be humanely destroyed and the intact head should be submitted for diagnosis.

Control

Horses can be vaccinated for rabies, therefore, immunization is recommended for horses in an endemic area. Vaccination should begin at three to four months of age with a booster shot given annually.

Several practical steps can be taken to protect against rabies:

1. Establish, with your veterinarian, a routine yearly rabies vaccination program for horses, dogs and cats on your farm.
2. Discourage adoption of wild animals as pets.
3. Be on the alert for wild animals which exhibit abnormal behavior.