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Lyme disease

Lyme disease, tick fever

Affected Animals:

Dogs, cats, and humans.

Overview:

Without treatment, Lyme disease causes problems in many parts of the dog's body, including the heart, kidneys, and joints. On rare occasions, it can lead to neurological disorders. Lyme disease most commonly is associated with symptoms such as a high fever, swollen lymph nodes, lameness, and a loss of appetite.

Dogs get Lyme disease from a tick that passes the *Borrelia burgdorferi* bacteria into the animal's bloodstream when it bites. The tick must remain attached to the animal's skin for at least one day before the bacteria can be transmitted.

The ticks, called Ixodes or deer ticks, generally are found in specific regions of the United States: the northeastern states, the upper Mississippi region, California, and certain areas in the South. Like dogs, people can suffer from Lyme disease -- they, too, catch it from ticks carrying the infection. Infected dogs do not transmit the disease to humans. For both canines and humans, the illness is treated by antibiotic medication.

Clinical Signs:

Fever, lymphadenopathy, lameness, anorexia, myocarditis, inflammatory joint disease, glomerulonephritis, and in rare circumstances, neurologic disease.

Symptoms:

A fever of more than 102.5 degrees Fahrenheit, swollen lymph nodes, a lameness that sometimes shifts from one leg to another, heart disease, inflamed joints, kidney disease, and neurologic disease.

Description:

Lyme disease is caused by a bacteria called *Borrelia burgdorferi*, which is passed to dogs through a bite from the deer tick. The tick must remain attached to the dog's skin for one to two days before the bacteria can be transmitted.

Lyme disease can be a multi-systemic illness, with signs that may include fever, swollen lymph nodes, lameness, loss of appetite, heart disease, inflamed joints, and kidney disease. Disorders of the nervous system, while uncommon, may occur as well.

A vaccine is available to prevent dogs from developing Lyme disease, although some controversy exists regarding its use. An owner should consult with a veterinarian for vaccine recommendations.

Diagnosis:

The veterinarian may be able to determine if a dog has Lyme disease after performing a blood test that will show exposure to the *Borrelia burgdorferi* bacteria. In previously vaccinated dogs, a special type of blood test must be performed to differentiate between the vaccine and actual exposure to the organism. Unfortunately, these tests do not provide a simple yes or no answer. The veterinarian must evaluate the results along with the dog's symptoms, and take into account whether the dog has been in an area of the United States where Lyme disease is endemic, such as the northeastern states, the upper Mississippi region, California, and certain southern states. A positive response to treatment is also important in making a final diagnosis.

Prognosis:

Dogs should begin to show signs of recovery two to three days after beginning treatment. However, the disease may recur within a few weeks or months; in these cases, the dog will need to return to antibiotic therapy for extended periods.

Transmission or Cause:

Lyme disease is caused by *Borrelia burgdorferi*, which is passed to dogs and people by deer ticks carrying the infection; the ticks get the infection from the white-footed mouse, which acts as a carrier. The only way a tick can transmit the bacteria is to remain attached to the animal's skin for one to two days. Unfortunately, these ticks are very small and easily can go unnoticed.

Treatment:

Treatment involves the use of an appropriate antibiotic, such as doxycycline, for at least three to four weeks.

Prevention:

There is a vaccine for the prevention of Lyme disease. Quick removal of a tick also will help prevent Lyme disease because the tick must remain attached to the dog's body for one to two days before the disease can be transmitted. Consult with a veterinarian about the different tick prevention products that are available, as they can be an effective way to prevent the disease.