

HEALTH COMMITTEE CORNER

The following is a summary of an article appearing in the January-February 2001 issue of Bloodlines.

“Ehrlichiosis”

By Jan Hendricks and Bob Wilson

Ehrlichiosis [air-lick-ee-OH-sis] is a silent and deadly killer that is claiming the lives of dogs in all 50 states. It is a tick-transmitted disease caused by rickettsial organisms. Rickettsiae are similar to bacteria. “The nature of this disease is such that it mimics a great many other diseases, and this tends to confuse and complicate treatment.” Success in treating the disease, however, depends on early recognition and treatment.

First described in 1935 in Algerian dogs, ehrlichiosis gained attention as a significant disease when military dogs returning from Vietnam died from complications of hemorrhagic fever. It was later determined that these complications were caused by a species of Ehrlichia.

The two most common species in dogs are *E. canis* and *E. risticii*. Most of the ehrlichia species are transmitted through contact with ticks with the exception of *E. risticii*. *E. risticii* has no vector (agent of transmission) clearly identified yet. Vectors such as ticks, flies, mosquitoes, fleas, and chiggers are all being considered. Several carriers for the disease have been identified such as mice, rats and other mammals (they themselves are not affected). There has been at least one report of transmission through placenta to puppies but no reports of transmission through breeding. It can also be passed from infected donor animals (i.e. blood transfusions) at vet clinics. The disease is not breed specific.

Ehrlichiosis causes a reduction in cellular blood elements (white blood cells, red blood cells and platelets). It destroys the white blood cells leaving the dog open to secondary bacterial infections, destroys the platelets causing bleeding, and destroys the red blood cells leading to anemia.

What are the signs of the disease?

The signs of the disease can be very subtle and mimic so many other diseases. This is in large part why this disease has been misdiagnosed and under-reported. In the acute (early) phase, the animal may have a fever, lose his appetite, show diminished interest in playing, and his eyes may have a glassy appearance. If the infection is caused by *E. risticii*, diarrhea and/or vomiting may be involved. It is during this phase that treatment is most effective. Without proper treatment the animal will move on the subclinical stage (no outward signs of disease) and may finally advance to the chronic stage. In the chronic stage damage such as internal hemorrhage, heart attack, stroke, renal failure, liver failure is often irreversible.

Pay attention to the following signs in order to catch the disease while it is still treatable: Weakness, cough, labored breathing, fatigue, fever, muscle/joint pain, discharge from eyes/nose, depression, weight loss, anorexia, increased thirst, incontinence, head tremors, disorientation, seizures, bleeding, anemia, swollen lymph nodes. Breeders may notice development of a serious illness during pregnancy or the delivery of ailing or dead puppies. While few dogs display all of the signs, most will show several. Keep in mind that *you* are the best judge of what is normal is your dog and what isn't.

Detection

Testing is done to reveal the presence of antibodies (indirect fluorescent antibody test – IFA). It may be difficult to diagnose infected dogs during the very early stages of infection as it usually takes 2-3 weeks to develop antibodies. Dogs should be treated with signs of disease even with a negative titer and then re-tested at a later date.

Treatment

Antibiotics in the tetracycline family are the first choice to treat the dog with ehrlichiosis. Tetracycline and doxycycline are both effective, however, doxycycline is the preferred drug as it has less potential side effects. Course of treatment is 10-30 days up to 6 weeks.

Prevention

Tick control is the main way to prevent ehrlichiosis. There is no vaccine for ehrlichiosis.

For more information on this disease we refer you to the full article appearing in Bloodlines.