PAW HEALTH NETWORK INC.

LYME DISEASE

ABOUT THE DISEASE

Lyme disease is a bacterial disease caused by Borrelia burgdorferi which is transmitted by the black-legged deer tick (Ixodes scapularis). Infection rates of the ticks vary according to region and season but require tick attachment for at least 53 hours to establish a stable infection.

Numerous clinical signs are seen in canine patients including recurrent lameness, fever, unwillingness to eat (anorexia), lethargy, or enlarged lymph nodes. These signs unfortunately are nonspecific and can mimic certain autoimmune joint diseases as well as Anaplasmosis. Please see the Anaplasmosis document for additional information.

In very rare cases, patients may develop an autoimmune inflammatory reaction of the kidneys which will cause failure and subsequent death.

With such severe, life-long, or fatal symptoms, the most effective means of treatment is to prevent the infection from ever occurring. Adequate monthly tick prevention is the first line of defense and should not be undervalued. The second line of defense is providing annual vaccination against **Lyme disease**.

OBTAINING A DIAGNOSIS

In-clinic and reference laboratory blood tests exist to determine if a patient has been exposed to **Lyme disease** by looking for antibodies to the organism. Unfortunately, because these are antibody tests, it can only be determined if a patient has been exposed at some time in its life.

Diagnosis is based on a combination of antibody testing, clinical history, physical exam findings, and in some circumstances a response to antibiotic therapy.

Direct detection of the organism is very difficult, time consuming (up to 6 weeks for culture), and in most cases produces negative results.

TREATMENT

In canine patients, antibiotic, anti-inflammatory, and pain medications will typically span four weeks to be effective. However, the concurrent administration of these medications may lead to confusion over the source of improvement and make diagnosis based upon a therapeutic response more difficult.

Patients with a bone or joint disease will see a rapid response, although some show incomplete resolution of symptoms.

Patents with kidney involvement are incredibly difficult to manage because the injury is autoimmune, not infectious. This means that the immune system is attacking the kidneys and very difficult to stop and reverse. Even with aggressive management, most patients have irreversible damage.

TIPS FOR SUCCESS

- Provide monthly external tick protection.
    - Patients can bring unattached ticks into the household that can be passed to other animals or humans. Keep yourself safe by treating your patients!
- Provide annual vaccination against **Lyme disease**.
    - Controversy exists with whether or not to vaccinate patients who have already tested positive for exposure. A general consensus is that vaccination will help reduce recurrence.