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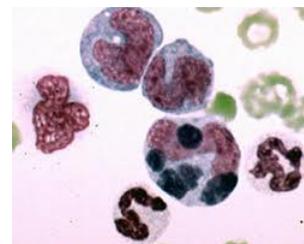
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Ehrlichia (Tick Fever)

- Ehrlichiosis is a disease caused by a rickettsial organism – a type of bacteria.
- The disease *affects primarily dogs and humans*, and is extremely rare in cats.
- In humans it is called biliary fever.
- The disease is *transmitted by the brown dog tick*, which carries the organism in its salivary glands.
- Ticks are infected by taking a blood meal from an infected dog.
- They stay infected for +/- 55 days following detachment, in other words if the tick is infected in the autumn, it is possible to transmit the disease the following summer.
- The disease *develops 1-3 weeks* after being bitten by an infected tick.
- Any dog breed can be infected, but Dobermans and German Shepherds tend to develop more chronic and severe forms of the disease.

Phases of Ehrlichia

There are three phases of illness with Ehrlichia:



ACUTE PHASE

- Lasts 2-4 weeks.
- Generally a *mild phase*.
- From the bite wound, the organism enters the bloodstream and attaches to white blood cell, where it replicates.
- These infected white blood cells are then removed by the spleen, liver and lymph nodes in the body.
- Platelet counts (responsible for blood clotting) also drop and immune-mediated platelet destruction can occur (body becomes confused and targets its own platelets).
- Some dogs are able to eliminate the infection themselves without any treatment, and enter the:

SUBCLINICAL PHASE

- Lasts *weeks to years*.
- The organism stays absorbed in the spleen, liver and lymph nodes without causing major symptoms.

CHRONIC PHASE

- The *most serious stage*.
- The infected white blood cells affect stem cell production in the bone marrow, suppressing red blood cell, white blood cell and platelet production.
- The body produces antibodies (the body's immune system) to fight the infection.

CLINICAL SYMPTOMS

ACUTE PHASE

- Lethargy/Listless
- Loss of appetite
- Sometimes enlarged lymph nodes and spleen
- Sometimes a fever
- Sometimes bleeding
- Rarely fatal

SUBCLINICAL PHASE

- No symptoms

CHRONIC PHASE

- Lethargy
- Loss of appetite
- Weight loss
- Fever
- Spontaneous bleeding from any part of the body (urine, stool, nose) +/- 60% of dogs will have abnormal bleeding.
- Bruising or small hemorrhages in the skin, gums, lips or around the eyes.
- Deep inflammation of the eyes (uveitis) may occur.
- Eye and Nasal discharge (water, purulent or bloody).
- Swollen lymph nodes
- Sometimes swollen and inflamed joints.
- Sometimes fluid accumulation in hind legs and scrotum.
- Sometimes anaemia – pale mucus membranes and gums.
- Seldom: Neurological Signs: Poor balance, difficulty walking, tremors, seizures.
- Can be fatal.



DIAGNOSIS

This is more difficult to diagnose than biliary fever. We usually diagnose Ehrlichia with multiple tests:

1. Clinical Symptoms
2. Blood Smear: Visualize organisms in white blood cells (+/- 4% of cases) and low blood platelet numbers.
3. The organism can sometimes be visualized in smears from the spleen, lymph nodes or joints.
4. Blood Tests:
 - Low platelet numbers
 - High globulin levels (Globulins are the antibodies in the body).
 - Mild anaemia (low red cell count).
5. Lab Tests

Blood Test for antibodies against Ehrlichia

+ Test: Indicates that the dog has been exposed to Ehrlichia. Does not necessarily imply active infection.

- Test: Does not fully rule out Ehrlichia, because a very sick patient will be too sick to produce antibodies and an early case may not yet have started to produce antibodies. Consecutive tests 2-3 weeks apart are recommended.

PCR Test for Ehrlichia

Test for the organism itself. Does not distinguish between dead and live organisms.

6. Sometimes we have to rely on response to treatment to confirm the diagnosis. There is usually a favorable response to the antibiotics within 24-48 hours

Treatment

Treatment is often given on suspicion. We rather treat unnecessarily than to misdiagnose and a chronic disease develops.

- There is a highly effective antibiotic available.
- Treatment, however, should be given for at least 14-28 days. It is very important to **COMPLETE THE COURSE OF ANTIBIOTICS.**

PREVENTION

- Tick Control!!!!!!Monthly treatment with a “spot-on” drug to prevent ticks from biting your dog. There are other products available, such as sprays and dips, but are much more time consuming.
- There is no vaccine available.

