Heartworm Disease in Ferrets

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The most dangerous parasite for ferrets is the heartworm (*Dirofilaria immitis*) that infects dogs and sometimes cats. Heartworms block major arteries to the lungs, causing heart failure and death. Because ferret hearts are so small, it takes only one or a few worms to kill a ferret.

Transmission

A microfilaria is an intermediate stage of the life cycle of the heartworm. Adult heartworms live and breed in the host's large blood vessels leading from the heart to the lung, and release microfilariae into the blood stream where they can be ingested by a biting mosquito. A mosquito that bites an infected dog, cat, or ferret cannot infect a susceptible animal the same day. It takes at least 10 days for microfilariae to develop to an infectious larval stage in the mouthparts of the insect.

Signs

A ferret with heartworms will seem tired all the time, may have a chronic cough, and becomes very short of breath if he is active for even a few minutes. Fluid builds up in the abdomen because of the failing heart and blocked blood vessels. The disease is rapidly progressive and fatal. Cardiomyopathy, another heart condition of ferrets, can cause identical symptoms.

Diagnosis

There is a blood antigen test to diagnose adult heartworms, and is often used in dogs. It is not 100% accurate in ferrets because it is affected by the number and sex of worms in the animal's body. The antibody test may be more sensitive than the antigen test, but false positive results are more common. These blood tests can help differentiate cardiomyopathy from heartworm disease. Radiographs (x-rays) and echocardiograms can assist in the diagnosis.

Prevention

Some drugs that are used in dogs and cats may be used in ferrets to kill the infectious larvae transmitted to them by mosquito bites, thus preventing mature heartworms from developing. These drugs are called preventives and do not kill adult heartworms. A different drug can be used to kill adult heartworms, but the treatment is risky in dogs and cats because the dead worms may block the arteries. There is even more risk with ferrets because of their smaller blood vessels. It is much safer to prevent heartworms from developing.

Heartworm preventives are recommended for both indoor and outdoor ferrets. Preventive drugs can be given once daily or once monthly depending on the specific drug selected. Medication must be given for the whole time mosquitoes are active (and usually one month after), which will vary with geographical location. In geographic areas where mosquitoes are present for most of the year, susceptible pets should be on heartworm prevention year round. Discuss the various preventive options and dosage schedules with your veterinarian.

Dogs and cats are often tested to make sure they do not already have heartworms before starting the preventive. Although ferrets with even one adult worm usually show signs of heart failure, your veterinarian may wish to perform a blood test to make sure your ferret is not already infected, before starting him on heartworm prevention.

In addition to preventives, to reduce the risk of heartworm disease ferrets can be housed indoors in well-screened rooms and never taken outside to play, a wise choice for several other reasons.

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