

If you own a dog and have had some contact with your veterinarian recently you've probably heard of Heartworm Disease. This parasitic malady is something all dog owners should have a basic understanding of. Recently the problem of Heartworm Disease has been hot topic in dog circles because a popular medication for the prevention of Heartworm infection has been recalled by its manufacturer. I suspect a few dog owners out there may be a bit confused so I thought a brief review of this canine health problem would be in order.

It was only after I moved to Vallejo from Southern California 19 years ago that I really had to know anything about Heartworm disease in clinical practice. In Southern California Heartworm disease was essentially non-existent. It turns out Heartworm infection is frequently diagnosed in dogs throughout Northern California, with the Sierra foothill areas being especially problematic. Many cases are diagnosed each year in our own northern Bay Area region.

While the Heartworm parasite can infect many different species of animal, including humans, its favorite species is the dog. Cats can develop the infection and in some areas of the country, primarily the Gulf coast and Atlantic states, there appears to be some real concern. In California, there is still debate about how prevalent and how significant feline Heartworm disease is. Most agree that the canine species is the primary target for this parasite.

At our hospital one of the most popular items with the kids is the jar that contains some real Heartworms. My guess is that it's pretty popular with their parents too. Most fascinating to pet owners is the size of the worms. Adult Heartworms can measure up to 12 inches in length, and in a single, severely infected dog there can be up to 100 worms present.

As you might suspect, foot-long worms in the heart and lungs is not a good thing. These parasites cause permanent damage to the large blood vessels that carry blood to the lungs, and the consequences can be devastating.

Adult Heartworms living in the heart and vessels of the lungs breed and produce microscopic "baby" worms called microfilaria that circulate around the body via the blood stream. This is where it gets interesting. A mosquito picks up these "baby" worms when it bites and takes a blood meal from the Heartworm infected dog. The "baby" worms actually live and develop within the mosquito for 2-3 weeks (remember these baby worms are microscopic). When the mosquito bites an uninfected dog the microfilaria (baby worms) enter this new dog's system and slowly develop while migrating to the heart. Six months after that fateful mosquito bite, this newly infected dog has adult worms living and causing damage in its own heart. These adult worms breed and produce more microfilaria and the Heartworm life cycle is complete.

It's important to note here that the only way a dog can contract the Heartworm parasite is through the bite of a mosquito. The developing Heartworm microfilaria must spend 2-3 weeks developing within the mosquito before it can enter another dog and grow to an adult.

Symptoms of Heartworm infection can range from no symptoms at all in mildly infected dogs, to severe coughing, weakness, collapse, and sudden death with heavy infestation. The most common symptoms reported are cough, diminished exercise tolerance, reduced appetite, and general unthriftiness.

Diagnosis of Heartworm infection, in most cases, is very straightforward using a simple blood test that checks the blood for the presence of certain proteins elaborated from the adult Heartworm. Most all cases of infection will be identified by this test.

The good news is that dogs found to be infected with the Heartworm parasite can be successfully treated. Medication is given that can kill the worms. Unfortunately, Heartworm treatment carries some significant risks to the patient.

While the safety and effectiveness of Heartworm treatment has improved in recent years, like so many things in medicine it's far better (not to mention cheaper) to prevent the problem in the first place. Preventing Heartworm infection in your dog is really quite simple and very effective. Several products are available. While preventative programs are quite effective, most veterinarians still recommend periodic (every one to three years) Heartworm blood testing to assure effectiveness.

Last month the Food and Drug Administration's Center for Veterinary Health sent letters advising veterinarians to discontinue using a heartworm preventative drug called ProHeart® 6 made by Fort Dodge Animal Health Inc. This product is unique in that it is the only injectable heartworm preventative drug, and a single injection protects dogs from Heartworm infection for 6 months. Since the product's introduction in June 2001, the FDA has received over 5000 reports of adverse reactions suspected of being associated with ProHeart® 6. Many of these reactions, according to the FDA, were considered serious, life threatening events. Fort Dodge has voluntarily complied with the FDA's request to temporarily cease marketing and

recall ProHeart® 6 until the FDA's questions regarding the product's safety are resolved. The FDA is forming an independent Advisory Panel to investigate the safety concerns. Fort Dodge has sent letters to veterinarians stating that they disagree with the FDA's interpretation of the safety data and restating their confidence in the safety of ProHeart® 6. We'll all be listening closely for the conclusions of the FDA's Advisory Panel on this issue.

If your dog is on the ProHeart® 6 program, you should contact your veterinarian for information and alternative methods of Heartworm disease prevention. *It is very important to understand that monthly, oral Heartworm preventative medications such as Heartgard®, Interceptor®, and Sentinel® are not included in this FDA recall, and are safe to continue using as prescribed by your veterinarian.*

Heartworm disease is a potentially life threatening illness. It's also an illness that's essentially 100% preventable. Rarely in Veterinary medicine are we presented with this kind of opportunity-to prevent such a devastating illness with such simple means.

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