

VECTOR-BORNE DISEASES IN DOGS AND CATS: CASE REPORTS IN CLINICAL PARASITOLOGY

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Canine and feline vector-borne diseases (VBDs) are caused by a wide range of pathogens, including viruses, bacteria, protozoa, and helminths. Whereas the distribution, clinical signs and risk factors in the dog are well known for many of these pathogens, the same cannot be said for the cat. While VBDs in cats will be briefly discussed, here the author presents three case reports of vector-borne diseases in the dog, with emphasis on novel therapeutic strategies.

Case 1. Leishmaniosis cured with intravenous Glucantime®

A seven year-old German Shepherd stray presented with severe clinical signs associated with canine leishmaniosis (CL), including weight loss, squamous dermatitis, uveitis, onicogryphosis and epistaxis. Blood work up revealed anemia, hypergammaglobinemia and kidney disease. Intravenous (iv) administration of 100 mg/kg of N-metilglucamin antimoniate (Glucantime®) lead to complete resolution of clinical signs. This drug is usually administered subcutaneously, but the severity of disease in the present case required a rapid decrease of parasite load achieved only through iv therapy.

Case 2. Heartworm disease (*Dirofilaria immitis*) cured with a combination of doxycycline (Ronoxan®) and ivermectin (Cardiotek Plus®).

A three year-old Irish Setter presented with lethargy and cough of approximately two months duration. The dog was positive for circulating microfilariae and antigens of *Dirofilaria immitis*. Cardiac ultrasound showed nematodes in the right pulmonary artery and thoracic radiographs showed a typical interstitial and perivascular inflammatory pattern. The dog was treated for 1 month with 10 mg/kg sid of doxycycline together with 6 months of ivermectin at 6ug/kg every 15 days. The dog was completely cured by 10 months. The only registered adulticide therapy for heartworm diseases is melarsomine dyhydrochloride (Immiticide®), but it can cause severe pulmonary thromboembolism. The present treatment regime was well tolerated, safe and effective.

Case 3. Sub-cutaneous dirofilariasis (*Dirofilaria repens*) treated with non-invasive surgical removal of the worm.

A four year-old cross breed dog was presented with several subcutaneous nodules on the trunk of nine months duration. Ultrasound revealed the presence of *Dirofilaria repens*. Using fine needle aspiration, all adult nematodes were removed from the masses, leading to complete cure. There is currently no registered adulticide therapy for *D. repens* and this mini-invasive procedure may represent a valid alternative to surgical removal of the mass.