



01480 - Leptospirosis: A Forgotten Disease in Dogs

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Abstract: Leptospirosis is a disease of dogs and humans that can be fatal, occurs worldwide, and originates from wildlife. The bacteria causing disease has many different strains, each coming from a different wildlife reservoir. Although vaccination of dogs against canine leptospirosis has taken place for decades, novel and potentially emerging vaccine-resistant strains from wildlife have been detected recently. As our society increasingly encroaches on wildlife habitat, there is greater risk for dogs to acquire infection from contact with infected wildlife. No current spatial or risk analysis has been performed for canine leptospirosis in the western US. Moreover, diagnostic tests that are rapid, sensitive, quantitative, and capable of discriminating among strains are lacking, which hinders our ability to manage individual cases and understand the epidemiology of this disease. Our study aims to determine risk factors for, and clinical characteristics of, modern leptospirosis in dogs by retrospective analysis of two large databases; generate a statistical risk model and use GIS-based mapping to detect spatial clustering of cases; develop a reliable, sensitive diagnostic method to identify active infections and differentiate among strains of *Leptospira interrogans*; and prospectively sample dogs in high risk areas in order to acquire isolates for future pathogenesis study and molecular genotyping, and to evaluate acute active infections of individual dogs to allow for successful treatment. Results from our study will provide valuable information that will improve success of patient management, reduce risk of infection to other dogs and humans, and inform future surveillance and vaccine efforts to improve canine health.

Cash: \$2,500.00 Commitment

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