

Kepalee Saeng-chuto 2015: Detection and Characterization of *Ehrlichia* spp. in Infected Dogs with Ocular Lesions. Master of Science (Veterinary Parasitology), Major Field: Veterinary Parasitology, Department of Parasitology. Thesis Advisor: Assistant Professor Burin Nimsuphan, Ph.D. 63 pages.

In Thailand, five species of *Ehrlichia* (*E. canis*, *E. chaffeensis*, *E. equi*, *E. risticii* and *Anaplasma platys*) have been reported in infect dogs. Although ehrlichial infections can cause ocular disorders, the severity and type of ocular disorder varies between individual infected dogs. The present study performed ocular examination, complete blood count and total protein measurement in 134 dogs brought into the Ophthalmology clinic. A 310 bp and 220 bp fragment of the *Ehrlichia* 16s rRNA and *p30* gene, respectively, were amplified by nested-PCR and direct DNA sequenced. Thirty-eight of these dogs were found to be positive for *Ehrlichia* 16s rRNA, of which the sequence analysis suggested 34 and 4 dogs were infected with *E. canis* and *A. platys*, respectively, with no multiple infections or other *Ehrlichia* species detected. Thirty-four dogs were found to be positive for *E. canis p30* gene, of which the sequence analysis suggested 18, 3 and 13 dogs were infected with *E. canis* strain Jaboticabal, Jake, and unidentified strain, respectively. The most common ocular disorders in dogs infected with *E. canis* were blindness, keratoconjunctivitis sicca and retinal detachment, while blindness and retinal detachment were found in *A. platys*-infected dogs. Hematological disorders were found anemia, thrombocytopenia and hyperproteinemia. Odd ratio analysis showed that thrombocytopenia and anemia were likely important factors for increasing retinal detachment risk. In this study, only *E. canis* and *A. platys* closely relate to be causative agents of ocular disorders in infected dogs. To the best of our knowledge, this is the first report of *A. platys* as a causative pathogen of both anterior and posterior uveitis in clinical situations.

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