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ANAPLASMOSIS IN DOGS: A REVIEW ON SOUTH AND SOUTHEAST ASIAN COUNTRIES

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Anaplasmosis affects dogs worldwide, varying from asymptomatic infection to a severe illness. Despite the high prevalence and socioeconomic impact, canine anaplasmosis is often neglected. This review provides insights into existing information and identifies knowledge gaps and future directions for research. All studies published on anaplasmosis in dogs from 2011 to 2023 in South and Southeast Asian countries were identified by searching scientific databases PubMed, Springer, Elsevier, Google Scholar, and Web of Science with 'anaplasmosis in dogs', 'seroprevalence of anaplasmosis in dogs', canine vector-borne diseases, 'canine vector-borne diseases' with country names. Forty-five articles were reviewed. Anaplasmosis in dogs was reported in all countries in these regions except Afghanistan, Bhutan, Brunei, Cambodia, and Timor-Leste. Twenty-six and nineteen articles were retrieved from Southeast Asian and South Asian regions, respectively. Thirty-six studies were based on dogs, three on the tick vector collected from dogs, and six on both dogs and ticks. Most (73%) of the articles were published between 2017 and 2023. *Anaplasma platys* was the predominantly identified *Anaplasma* species infecting dogs, and the brown dog tick, *Rhipicephalus sanguineus,* as the vector of *A. platys,* the most common dog tick species. Only three studies have been conducted in Sri Lanka on the prevalence, clinical, and laboratory findings of anaplasmosis in pets, stray, and working dogs reporting *A. platys* infections. The prevalence of anaplasmosis varied widely from 39% in Malaysia to 0.25% in Myanmar. Most studies (80%) were based on molecular identification and prevalence estimation, including PCR (62%) of the studies, ELISA in 8.8%, microscopy in 15.5%, and 13.3% combination of the above tests. The available studies provide only basic research instruments; many significant knowledge gaps on the pathogen and tick transmission were identified. A better understanding of these will improve immunological mediations, aiding the design and production of effective vaccines and alternative pharmacological interventions against the pathogen.

Keywords: Anaplasmosis, *Anaplasma platys*, South Asia, Southeast Asia