

A PRELIMINARY STUDY OF THE SEROPREVALENCE OF LEPTOSPIROSIS IN DOMESTIC DOGS IN SUBURBS OF COLOMBO, SRI LANKA.

M.G.Thammitiyagodage¹, P. Somaratne¹, K.C.R Perera¹ and M. A. Roshan Priyantha²,

1. Medical Research Institute, No 527, Dr. Danister de Silva Mawatha, Colombo 8, Sri Lanka.

2. Veterinary Research Institute, P.O. Box 28, Gannoruwa, Peradeniya.

Leptospirosis is an emerging infectious disease in Sri Lanka and increasing number of patients reported every year. Domestic dogs are a potential source of infection if they are not managed properly. Objectives of this study were to determine: vaccination patterns of domestic dogs, habits in relation to keeping dogs, predominant strains of *Leptospira* present in dogs, antibody titers of vaccinated and vaccinated dogs in suburbs of Colombo.

Questionnaires were administered to 134 dog owners using six veterinary practices. Dogs aged three months to 15 years were recruited to the study and blood samples collected. Antibody titers and strains were determined using Microscopic Agglutination Test (MAT).

Based on the questionnaire, 45% of the pet owners keep their dogs inside the house, 37% keep them outside and 18% keep them in both conditions. In the surveyed population, 62% vaccinated their dogs at least once for distemper, hepatitis and leptospirosis. The Vaccinated population was categorised in to four main groups; (1) dogs that are less < 1 year old and given primary vaccination, (2) dogs given primary vaccination and subsequent booster, (3) randomly vaccinated dogs and (4) regularly vaccinated dogs. Antibody titers ranged from 100 to 3200 in vaccinated population. Of the vaccinated population, 25% reported negative titers.

Although 38% of surveyed dogs had never been vaccinated for Leptospirosis, 56% of unvaccinated dogs had antibody titers ranging from 100 to 3200 indicating acute or convalescent infection. Serum samples were either positive for a single serogroup of *Leptospira* strains (*L. Canicola*, *L. Australis*, *L. Icterohaemorrhagica*, *L. Djsimea*) or for mixed serogroups. The predominant form of mixed infection was with *L. Australis* and *L. Canicola*.

Free – ranging dogs may contribute to increased incident rate of Leptospirosis in Sri Lanka and be the reason for the high antibody titres observed among unvaccinated domestic dogs. Very high antibody titers for *Leptospira* were observed in stray dogs indicating an acute or convalescent stage of infection. As dogs may excrete *Leptospira* spirochete in their urine free-roaming dogs/ stray dogs can be a potential source of infection unless their population is managed appropriately.

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