DETECTION OF HELMINTH INFECTIOS IN DOGS AND SOIL CONTAMINATION IN RURAL AND URBAN AREAS

MY Noor Azian¹, L Sakhone², S Lokman Hakim³, MY Yusri¹, Y Nurulsyamzawaty¹, AH Zuhaizam¹, I Mohd Rodi⁴ and MN Maslawaty¹

¹Parasitology Unit, Infectious Diseases Research Center, Institute for Medical Research, Kuala Lumpur, Malaysia; ²Entomology Section, Center for Malariology, Parasitology and Entomology (CMPE), Ministry of Health, Vientaine, Lao PDR; ³Environmental Health Research Center, Kuala Lumpur, Malaysia; ⁴Epidemiology and Biostatistics Unit, Institute for Medical Research, Kuala Lumpur, Malaysia

Abstract. A study was conducted to determine the helminthes in dog’s feces and soil samples from urban and rural areas. Six species of nematodes (Toxocara sp, an undetermined nematode larvae, Strongyloides sp larvae, Ascaris sp ova, hookworm ova, Trichuris sp ova) and one species of Cestode (Taenia sp) were found in 175 stool samples. Seventy-eight point nine percent of stool samples were positive for helminthes. Mixed infection with at least one parasite was found in 32.6% of the samples. The prevalence of helminth infection ranged from 1.1% to 45.1%. The prevalence of hookworm sp was the highest with 45.1%. The highest prevalence in urban dogs was hookworm sp in 76.7% and in rural areas was Ascaris sp in 48.7%. Soil samples were also examined to determine contamination of the environment, especially due to Toxocara canis, as a potential source of infection. Urban soil samples showed a higher contamination rate with 26.7% compared to rural areas with 4.9%. Toxocara ova were the most prevalent helminthes contaminating the soil with 12.1%. This study showed that humans from both urban and rural areas are at risk of acquiring helminth infection from contaminated soil.