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Investigation of Leptospira Infection in Stray Animals in Thailand: Leptospirosis Risk Reduction in Human

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Abstract : Leptospirosis is a public health concern zoonosis in Thailand. Human and animals are often infected by contact with contaminated water. The infected animals play an important role in leptospira infection for both human and other hosts via urine. In humans, it can cause a wide range of symptoms, some of which may present mild flu-like symptoms including fever, vomiting, and jaundice. Without treatment, Leptospirosis can lead to kidney damage, meningitis, liver failure, respiratory distress, and even death. The prevalence of leptospirosis in stray animals in Thailand is unknown. The aim of this study was to investigate leptospira infection in stray animals including dogs and cats in Songkhla province, Thailand. Total of 434 blood samples were collected from 370 stray dogs and 64 stray cats during the population control program from 2014 to 2018. Screening test using latex agglutination for the detection of antibodies against Leptospira interrogans in serum samples shows 29.26% (127/434) positive. There were 120 positive samples of stray dogs and 7 positive samples of stray cats. Detection by polymerase chain reaction specific to LipL32 gene of Leptospira interrogans showed 1.61% (7/434) positive. Stray cats (5/64) show higher prevalence than stray dogs (2/370). Although active infection was low detected, but seroprevalence was high. This result indicated that stray animals were not active infection during sample collection but they use to get infected or in a latent period of infection. They may act as a reservoir for domestic animals and human in which stay in the same environment. In order to prevent and reduce the risk of leptospira infection in a human, stray animals should be done health checking, vaccination, and disease treatment.

Keywords : leptospirosis, stray animals, risk reduction, Thailand
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