CASE REPORT

CANINE ORIENTIA TSUTSUGAMUSHI INFECTION: REPORT OF A CASE AND ITS EPIDEMICITY

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Abstract. A lethargic household dog was referred to a private hospital in Japan. Diagnosis was carried out by the polymerase chain reaction (PCR) method developed for human Orientia tsutsugamushi infection using the dog’s anticoagulated peripheral blood. Karp, Kato and Kuroki-type genomes were detected and the dog was diagnosed with O. tsutsugamushi infection. These findings demonstrate that dogs can act as a host for O. tsutsugamushi and the PCR method developed for human beings can be used for the diagnosis of canine O. tsutsugamushi infection. A concurrent epidemiological study examined 10 asymptomatic dogs that were fed in the same area as the sick dog. Kuroki-type genome in all dogs, Gilliam-type genome in 6 dogs and Kawasaki-type genome in 3 dogs were detected. These results provide further evidence that dogs can be naturally infected with O. tsutsugamushi outdoors and that dogs play a role as a host in the lifecycle of O. tsutsugamushi.

Keywords: dog, epidemicity, genus Haemaphysalis, Orientia tsutsugamushi infection, PCR