CANINE LEPTOSPIROSIS AND ZOONOTIC TRANSMISSION: CASE REPORT OF HUMAN INFECTION DURING PROFESSIONAL ACTIVITY

RONIZE ANDRÉIA FERREIRA[1], BRENO ALMEIDA DE OLIVEIRA[1]; IGOR DA SILVA COUTINHO MESQUITA[2], ROBERTA DIAS RODRIGUES ROCHA[1]

[1]CENTRO UNIVERSITÁRIO NEWTON PAIVA WYDEN, BELO HORIZONTE, MINAS GERAIS; [2]PET HOTEL CAVE CANEM, BELO HORIZONTE, MINAS GERAIS

Abstract

Leptospirosis is a zoonosis of major public health concern, with the potential to significantly impact both human and animal health. *Leptospira* spp. affect various animal species, including rodents, which are the main urban reservoirs, as these bacteria are continuously excreted in the urine of these hosts. However, dogs can also be carriers of the disease, and in close contact with humans, they may contribute to disease transmission. Transmission occurs through direct contact with animals or contaminated water and soil. Symptoms range from asymptomatic to severe systemic manifestations. Factors such as seasonal variation and a lack of information on diagnosis and treatment increase the risks and complications of the disease. This study presents a case of fatal canine leptospirosis and occupational zoonotic transmission. A 35-year-old immunocompetent veterinarian treated a one-year-old male mixed-breed dog, which had an up-to-date vaccination protocol, and presented with anuria, jaundice, prostration, and abdominal distension three days after ingesting a rat. The animal was hospitalized, and laboratory tests revealed elevated levels of urea, creatinine, aspartate aminotransferase, and alanine aminotransferase. The dog succumbed 72 hours after treatment, and serological testing confirmed the presence of two Leptospira serovars: *L. copenhageni* and *L. castellonis*. In this context, seven days after the consultation, the veterinarian underwent serological testing for leptospirosis, which returned positive for *L. shermani*. On the twelfth day, the veterinarian developed nausea, arthralgia, myalgia, and fever. He was hospitalized, and additional tests confirmed leptospirosis. Treatment with ceftriaxone was effective, resulting in a favorable clinical outcome. This case highlights the importance of prophylaxis and early diagnosis for the prevention or favorable progression of leptospirosis, alerting animal health professionals to the risks of zoonotic transmission, especially for those working in high-exposure environments.

Supported by: CNPq, Newton Paiva Wyden.

Keywords: risk factors, occupational leptospirosis, dog.