RESUMO SIMPLES - OUTRAS ÁREAS TEMÁTICAS

CANINE DISTEMPER VIRUS INFECTION IN A FREE-LIVING SOUTHERN TAMANDUA (TAMANDUA TETRADACTYLA): HEMATOLOGICAL AND MOLECULAR FINDINGS

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Anteaters are placental mammals belonging to the Order Pilosa and the Family Myrmecophagidae. In Brazil, there are three species that can be found in all Brazilian biomes: the giant anteater (Myrmecophaga tridactyla), the southern tamandua (Tamandua tetradactyla), and the silky anteater (Cyclopes didactylus). The destruction of natural environments, fires, hunting, roadkill, attacks by other animals, and diseases threaten these animals. Distemper is an infectious disease caused by an enveloped, single-stranded paramyxovirus of

the genus Morbillivirus, which is transmitted through direct contact with body fluids from infected animals. In dogs, it can progress from an acute form that causes apathy, eye and/or nasal secretions, diarrhea, and skin lesions to challenging neurological conditions and death. A southern tamandua presenting apathy, bloody diarrhea, and bilateral eye discharge arrived for treatment at the wildlife department of a university veterinary hospital. A blood sample was collected for diagnostic screening, processed in a Sysmex® PocH–100iV Dif veterinary hematology analyzer for total red blood cell, white blood cell, and platelet counts and hemoglobin measurement. The hematocrit was determined using the microhematocrit technique; the differential count and evaluation of leukocyte morphology and the search for hemoparasites and intracellular inclusions were performed based on the evaluation of blood smears after instant staining (Panótico Rápido) and viewed under an optical microscope (Nikon E200). The animal presented anemia, leukocytosis, and hypoproteinemia. Structures compatible with Lentz corpuscles were visualized inside the red blood cells. RNA was extracted from whole blood using the trizol method up to the alcohol addition step, followed by purification steps using the Purelink Viral RNA Extraction Kit (Invitrogen®). The extracted total RNA samples were subjected to a reverse transcription reaction using the High Capacity cDNA Reverse Transcription® Kit (Applied Biosystems). The RT-qPCR assay amplified a 289 bp fragment of the conserved region of the nucleoprotein (NP) of the canine distemper virus. A vaccine sample was used as a positive control, ultrapure water as a negative control, and the β-actin gene as an endogenous control. Although nonspecific, the clinical signs were similar to those described in the literature for distemper in dogs. The presence of Lentz corpuscles is a pathognomonic finding for the disease. Molecular diagnosis herein confirmed infection with the virus. The animal's clinical condition worsened, resulting in its death. This case expands knowledge about the circulation of the distemper virus in wildlife and is consistent with other reports, reinforcing that the southern tamandua may act as a species susceptible to infection. Ecological studies recognize infectious diseases as factors that can negatively influence wild populations and, therefore, studies on the occurrence and prevalence of diseases are an important strategy for the conservation of anteaters.

Palavras-chave: distemper; southern tamandua; morbillivirus; lentz corpuscles; wildlife.