SUB-ÁREA: Leptospirose em Cães e Gatos

Combining diagnostic tests appears to be the most effective strategy for identifying dogs with leptospirosis

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Leptospirosis is a serious infectious disease, zoonotic, with global distribution, whose diagnosis remains neglected. The disease in dogs occurs through contact with urine or water contaminated with the bacteria. The objective was to compare two diagnostic tests and associate the clinical signs of dogs suspected of having leptospirosis. Twenty-four dogs with clinical suspicion were selected for the study. Complete blood count tests, biochemical serum (urea, creatinine, ALT, ALP), and confirmatory tests were requested. In order to confirm the leptospirosis diagnosis was realized, the microscopic seroagglutination test (MAT) in the Laboratory of Infectious Diseases of the Faculty of Veterinary Medicine of the Federal University of Uberlândia, for the detection of antibodies against 15 serogroups of *Leptospira* spp. and real-time PCR (qPCR) were requested. Of the 24 dogs suspected of leptospirosis, 25% (6/24) were positive in the MAT, and 12.5% (3/24) in the qPCR, with 4.17% (1/24) being positive in both diagnostic tests evaluated, totaling 8 animals detected in at least one test. When combining MAT and qPCR, the positivity was 8/24 (33.3%), showing an increase in the recognition of truly positive animals. The sensitivity of qPCR was 16.7% and the specificity was 88.9%. The predominant reactive serogroups were Icterohaemorrhagiae (33.33%) and Djasiman (33.33%), followed by Ballum (16.60%). There was no statistically significant difference in serum levels of the evaluated biochemical parameters between the positive and negative groups for the diagnostic tests. However, in the positive group, creatinine, urea, and ALP showed elevated serum levels compared to the reference values for the specie. It is concluded that for the diagnosis of acute canine leptospirosis, the veterinarian should request paired MAT and urine qPCR to increase the chances of diagnosis. qPCR proves to be a complementary diagnostic tool when combined with MAT and clinical-pathological findings, resulting in the correct direction of treatment and management of dogs suspected of leptospirosis.

Keywords: *Leptospira*; serum biochemistry, canine, MAT, qPCR.

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