

**Evaluation of a rapid serological test for the diagnosis of *Leptospira* spp infection in domestic dogs**

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The aim of this study was to evaluate the performance of a rapid test (rELISA) for the detection of specific IgM antibodies of pathogenic serovars of *Leptospira* in serum samples of domestic dogs. For that, a cross-sectional study was conducted using 92 serum samples from dogs of different breeds, sex and age from regions of Los Ríos and Los Lagos, Chile. As reference test, it was used Microscopic Agglutination Test (MAT) with a panel of 6 serovars. The rapid test was developed by KIT and performed according to designers instructions noting the presence or not of staining in the test line in the output window of the device to categorize the result as positive or negative. It was evaluated the agreement and the diagnostic performance of the rELISA against MAT. Forty four of the samples were positive for MAT (serogroups Sejroe, Pomona, Canicola, Icterohaemorrhagiae, Ballum and Autumnalis with antibody titers between 1:100 and 1:1600) and 48 samples were negative. Out of MAT positive animals, 12 were patients with recent vaccination against leptospirosis and 2 samples were from dogs with clinical signs: depression, anorexia, jaundice and/or alterations to the biochemical profile indicative of kidney disease. The agreement between tests was low (Kappa=30,3%) and rELISA sensitivity was 25,0% (95% CI=13,2; 40,3), specificity was 97,9% (95% CI=88,9; 99,9%). The positive predictive value was 91,7% (95% CI=61,5; 99,8) and the negative predictive value was 58,8% (95% CI=41,2; 69,7). The rELISA could be useful for the detection of clinical cases of leptospirosis in veterinary clinics to be used as an 'in house test', to provide preliminary information about the serologic status of suspected dogs, but this data should be confirmed with a more accurate diagnostic test.