Detection of antibodies to Leishmania donovani in animals in a kala-azar endemic region in eastern Sudan: a preliminary report.

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Abstract:

The prevalence of antibodies against Leishmania donovani in selected domestic and wild animal species in 2 villages in Sudan with active L. donovani transmission in humans was investigated. Screening of domestic animals (donkeys, cows, sheep, goats, camels and dogs) with the direct agglutination test (DAT) detected reaction rates above the cut-off titres in donkeys (68.7%), cows (21.4%) and goats (8.5%), and which were also found in wild rats (5.5%). Sera of sheep, camels and dogs had a weak agglutination reaction below the cut-off titre. Testing of the same sera by enzyme-linked immunosorbent assay (ELISA), against a lysate of L. donovani promastigotes, showed reaction rates above the cut-off optical density in cows (47.6%), goats (13.6%), and in rats (4.1%). No Leishmania parasite was isolated from spleen, liver, bone-marrow or spleen of Nile rats.