Current Issue
Browse Issues
Search
About this Journal
Instruction to Authors
Online Submission
Subscription
Contact Us
RSS Feed

Acta Medica Iranica
2009;47(4) : 1-6

Diagnosis of Canine Visceral Leishmaniasis by ELISA Using K39sub Recombinant Antigen

M Taran , M Mohebali, MH Modaresi, S Mamishi, M Mahmoudi, M Mojarad

Abstract:

Background: Surveillance of the canine reservoir is highly important to help control of visceral leishmaniasis in human. It is therefore imperative to improve and develop new tools reliable, easy to use, and cheap for the diagnosis of canine leishmani¬asis. K39 sub recombinant antigen of Leishmania infantum was expressed in prokaryotic system and evaluated for sero-diagnosis of canine visceral leishmaniasis (CVL). Methods: The gene fragment encoding a single 39-amino acid subunit of the kinesin-related protein k39 (k39sub) was ampli¬fied from DNA of Iranian strain of L. infantum (MCAN/IR/96/LON49) and cloned into a pMAL-p2 expres¬sion vector in frame with maltose-binding protein (MBP) fusion. The antigenic properties of L. infantum recombinant K39 sub¬unit (39 amino acids) have been tested for the serological diagnosis of CVL by ELISA. K39sub ELISA for CVL was com¬pared with a standard direct agglutination test (DAT) on 55 clinically infected dogs and 71 healthy controls from en¬demic areas of Ardabil and East Azerbaijan provinces, north-west of Iran. Results: A sensitivity of 72.7% and specificity of 87.3% were found at a 1:320 cut off titer when DAT confirmed cases were compared with healthy control. A good concordance was found between k39sub ELISA and DAT (k= 81.0). Conclusion: Given the antigenic properties shown by the k39sub, we think this protein carry immunodominant epitopes and are valuable for the sero- diagnosis of L. infantum infection in dogs.

Keywords:

K39antigen , Leishmania infantum , Dogs

TUMS ID: 3526

Full Text HTML Full Text PDF 113 KB

top