SERODIAGNOSIS OF INDIAN KALA-AZAR BY ELISA USING PURIFIED LEISHMANIA SPECIFIC ANTIGENS

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Till date, unequivocal diagnosis of any form of Leishmaniasis is almost exclusively based on identification of the parasite in the tissue biopsies of patients by microscopic examination. However, this procedure has certain limitations. Previously, enzyme linked immunosorbent assay (ELISA) has been successfully used for serodiagnosis of a variety of parasitic diseases mainly because of its relative simplicity and a high degree of reliability. In many endemic areas of Kala-azar, serodiagnosis of the disease by ELISA using crude parasite antigen preparations is often complicated, as cross reactions were observed between antigens and non-specific antibodies present in the sera of normal individuals as well as individuals who are

clinically negative for Kala-azar but suffering from other parasitic diseases. In this study, we have used affinity purified flagellar antigens of the parasite to assess the reliability of ELISA as a specific immunoglobulin test for detection of kala-azar. A total of 180 sera collected from patients suffering from kala-azar, leprosy, tuberculosis and malaria including normal healthy individuals were tested for presence of Leishmania specific circulating antibodies. Results clearly indicated that unlike with crude antigen preparations, ELISA using purified flagellar antigens is highly sensitive and approximately 95% specific for diagnosis of kala-azar.