INFLUENCE OF GROUPS OF T. cruzi TcI, TcII AND Z3 IN THE DIAGNOSTIC PERFORMANCE OF CHAGAS DISEASE IN BRAZIL AND PANAMÁ

T. cruzi, the agent of Chagas disease, could be classified within two major lineages, T. cruzi Group I (TcI) and T. cruzi Group II (TcII) and Z3, presenting differences in several biochemical and biological aspects. Genetic markers, which allow typing of T. cruzi, showed that the two major groups have different phylogenetic origin that co-evoluted in different ecological and epidemiological traits. The bulk of these results stimulated investigations regarding to possible association of T. cruzi groups with human infection and serological titers. This project aims to analyze the sensitivity and specificity of ELISA and TESA-blot, performed with strains of T. cruzi TcI, TcII and Z3 as antigens [total extract of epimastigote forms (EAE) or exoantigens of trypomastigote forms (TESA)]. A sensitivity of 100% and specificity of 74.5% - 84.2% were obtained in EAE-ELISAs, with 154 analyzed samples. Cross-reaction of 71 - 100% were presented by Leishmania spp. infected individuals and 9% to 28% by T. rangeli. In a seroprevalence study performed in Mendoza-Panama, TESA-blot (a reference test) as well as EAE-ELISAs showed positivity of 13.3% (16/120). In this study were included the analyses of six commercially available ELISAs, whose only two showed a positivity of 13.3%. The sensitivity data led us to conclude, that tests for diagnosis of Chagas disease can be performed with non regional strain. T. rangeli infected patients seems to have no antibodies against T. cruzi or T. rangeli antigens, so these patients present no problem in the Chagas disease diagnosis.

Zuleima del C. Caballero Espinosa

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