Coexistence of Trypanosoma cruzi genotypes in wild and periodomestic mammals in Chile

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Epidemiologic evidence suggests a preferential association of Trypanosoma cruzi genotypes TCI and TCII with marsupials and placental mammals, respectively. We identify T. cruzi genotypes from 117 infected mammals. Minicircle DNA amplified by polymerase chain reaction and hybridization with a panel of four specific probes showed frequencies for the T. cruzi genotypes TCI, TCIIb, TCIId, and TCIIe of 38%, 41%, 26%, and 9%, respectively, in wild mammals. In peridomestic mammals, frequencies for the same clones were 29%, 33%, 43%, and 14%, respectively. As a whole, mixed infections are found in more than 31% of the cases, which indicates the coexistence of multiclonal strains circulating in nature, and the absence of specific associations between T. cruzi genotypes and reservoir hosts, including marsupials. The direct characterization of parasite genotypes emphasizes the importance of obtaining unbiased epidemiologic information from parasite-endemic areas. Results are discussed in the cont