MOLECULAR STUDIES OF Trypanosoma cruzi ISOLATED STRAINS FROM PATIENTS WITH CHAGAS DISEASE IN RIO GRANDE DO NORTE STATE

PAIVA, DCC1; MARINHO, MJM1; ANDRADE, CM1; PEREIRA, WO1


Introduction: The Trypanosoma cruzi is the etiological agent of Chagas disease. The great diversity of circulating strains of this protozoan is, probably, the responsible for the multiplicity manifestation ways in the Chagas disease, which may show in cardiac form, digestive, mixed or undetermined. A high rate of seroprevalence to T. cruzi has been documented in several cities in Rio Grande do Norte (RN) state, in the last epidemiological surveys. Objective: In this way, it is intended to identify the strains of T. cruzi from chagasic patients from the endemic area in RN, in order to characterized the genetic profile of the circulating parasite in the regions and generates instruments to support diagnosis. Methodology: With the approval of Ethic Council – CEP/UERN, the chagasic patients from this region will be included and subject to peripheral blood collection to extract parasitic DNA and molecular identification of the T. cruzi strain. This strains will be classified in DTU's (discrete typing unit) by D7 divergent domain of 24Sα rDNA amplification; RFLP (Restriction fragment length polymorphism) of the mitochondrial cytochrome oxidase subunit II (COII) gene; intergenic region of spliced leader genes (SL-IR) and the loci microsatellite PCR assay. The data will be yet correlated with clinic’s information diagnosed by detailed physical examination, application of clinic-epidemiologic protocols, risk score of ischemic stroke, risk score of Rassi death, in addition of complementary exams like electrocardiogram, radiography and others. Expected Results: The characterization of the circulating strains in this region of endemism will have important rule in establishment the diversity of the parasite in this population and release essential information in exploration of new tests to earlier diagnoses, improving the prognosis and treatment of Chagas disease.

Key-words: Chagas disease, Trypanosoma cruzi strains, diagnosis instruments.