INVESTIGATION OF POTENTIAL BIOMARKERS NON-INVASIVE TO CHRONIC CHAGASIC CARDIOMYOPATHY

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Introduction: The Chagas Disease (CD) is a pathology that in about one third of people infected the disease evolved to Chronic Chagasic Cardiomyopathy (CCC), clinic form responsible for the majority number of death. Many studies has gave special attention to seek the discovery of the factors involved with the progression to this disease form. The patterns of genic expression of myocardium are modified in the CCC, but the underlying molecular mechanisms to such changes still not are elucidated. The presence of circulating miRNAs, as well as its specificity has been target from studies with biomarkers non-invasive for early diagnosis in patients with non-chagasic heart disease. Objectives: This study aim will be evaluate the expression of circulating hsa-miR-1 as a possible marker non-invasive associated with CCC. Methodology: Cross-sectional study, with the realization both qualitative and quantitative analysis of this circulating miRNA, by the extraction of hsa-miR-1 from the serum of individuals divided into five groups (non-Chagas disease and without heart disease, cardiac patients without Chagas disease, Chagas disease in FI and contractility segmental changes on echocardiogram, Chagas disease in FI and without alteration in the echocardiogram and patients with CCC), and later reverse transcription and quantification with PCR in real time. Besides will be evaluated of the Clinic D1 messenger RNA expression, and the expression of this protein in the serum of this individuals. Expected Results: Elucidate marker that may help the medical conduct with regard the possibilities of an individual evolved to a more serious form of disease. Furthermore as the alterations are cardiac, this biomarkers has to show a predominant characteristic, that is not invasive. Been this the key-point to starts our project; seek for a marker, non-invasive, that can predict the risks of an individual carrier of an Undetermined Form evolved to a Cardiac Form.

Key-words: Chagas Disease; Biomarker; hsa-miR-1.