Abstract No.   **28**
Category: **Heart Failure and Cardiomyopathies**
Title: **Cardiovascular Biomarkers as Predictors of Short-Term Mortality in Chronic Chagas Cardiomyopathy**
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Abstract:

Background: Chronic Chagas Cardiomyopathy (CCM) represents a significant cause of morbimortality in endemic countries. Considering its unique cardiac involvement and the higher mortality when compared to other etiologies of heart failure, the prediction of this outcome acquires a significant value. This study aimed to evaluate the value of a panel of biomarkers to predict the risk of mortality and related outcomes in patients with CCM.

Methods: Prospective cohort study performed in a fourth level referral center from 2015 to 2018. Adults with a serological diagnosis of Chagas disease and an echocardiographic and/or electrocardiographic abnormality consistent with CCM were included. A single measurement of the serum levels of NTproBNP, Gal-3, NGAL, Hs-cTnT, sST2, and Cys-c was performed. The primary outcomes studied were two-year mortality and a composite outcome (CO) of mortality, heart transplantation and left ventricular assistance device (LVAD) implantation.

Results: After a two-year follow-up, mortality rate was 12%, while the CO was observed in 16% of the patients (3 patients underwent heart transplant and 1 LVAD) All of the evaluated biomarkers were significantly associated with mortality, having the NTproBNP and the Hs-cTnT the highest AUC´s for the CO (0.89 and 0.85, respectively). The combination of these two biomarkers over their selected cut-off values (1000 pg/ml and 16 pg/ml, respectively) significantly increased the risk of the CO (HR 4.61 [95% CI, 1.48-14.34]). Remarkably, there were no primary outcome cases in patients in which the two biomarkers were under their cut-off values, while in the opposite case, the CO was observed in 48% of the individuals. Finally, the addition of these two biomarkers to a model of clinical variables significantly increased the performance of the model (AUC= 0.92).

Conclusion: All the evaluated biomarkers were significantly associated with short-term mortality and our related CO in CCM patients, having the NTproBNP and Hs-cTnT the higher predictive values. The use of reliable cardiac biomarkers for assessing complications risk represents a relevant improvement in the prognosis evaluation of patients with CCM.