INFLUENCE OF AEROBIC EXERCISE ON THE PROTEIN IMMUNOCONTENT INVOLVED WITH ANGIOGENESIS IN MUSCLE SOLEUS OF RATS WITH *COR PULMONALE*

Alexsandra Zimmer[1], Rafael Colombo[2], Rafaela Siqueira[1], Isnard E. Litvin[2], Alessandra E. G. Godoy[2], Magda A. B. C. Bellini[2], Adriane Belló-Klein[1]

[1]Universidade Federal do Rio Grande do Sul; [2]Laboratório de Fisiologia Cardiovascular/UFRGS

Introduction: *Cor pulmonale* is a disease characterized by evident structural and functional changes in the right ventricle due to a primary pulmonary dysfunction. **Objectives:** to analyze the encroachments of aerobic exercise on the proteins immunocontent involved in angiogenesis and the structural changes of the soleus muscle of rats with Cor pulmonale. **Methods:** 19 Wistar rats were divided into four groups: sedentary control (CS), sedentary monocrotaline (MS), trained control (CT) and trained monocrotaline (MT). After two weeks of pre-training on a treadmill, the MS and MT mice were given a single intraperitoneal dose of MCT (60 mg / kg). After drug administration, the animals of CT and MT groups underwent three weeks of aerobic exercise. Soleus muscle was removed and frozen in order to develop the following analyzes: vessels, interstitium percentage, and larger diameter of muscle fibers as well as immunocontent growth factor of vascular endothelial (VEGF), angiopoietin (Ang-1) and Tie-2 receptor. Molecular results were expressed as mean ± standard deviation, and after using two-way ANOVA, they were complemented by Bonferroni's test, $p = 0.05$. **Results:** Only has the Ang-1 immunocontent been increased in monocrotaline animals when compared with control animals ($p = 0.05$). The other results (immunecontents and histological outcomes) showed no alterations between the groups. **Conclusion:** It is suggested that aerobic exercise has influence on the immunocontent of Ang-1 as well, is able to promote the stabilization of new vessels in the soleus muscle of rats with *Cor pulmonale* at this stage.

CEUA/UFRGS approval: 21398.

E-mail address: zimmeralexsandra@gmail.com.

Financial support: CNPq; CAPES; FAPERGS