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

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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 (immunocontents 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.
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Financial support: CNPq; CAPES; FAPERGS