ASSOCIATION BETWEEN CARDIORRESPIRATORY FITNESS, ANTHROPOMETRIC TRAITS AND SERIC LEVELS OF CITOKINES

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Several studies have shown that the maximum oxygen uptake (VO2max) may be inversely related with overweight and obesity. Obesity is considered a mild inflammatory condition and predisposes individuals to ills. These obese or/and overweight individuals are characterized by abnormal cytokine production. Purpose: To investigate the association between body mass index (BMI) and VO2max with seric levels of cytokines (leptin and adiponectin) in Brazilian military males. Methods: Thirteen militaries aged (37,9±8,7 year), weight (89,2±9,5 kg), height (173,7±6,1 cm) and BMI (29,4±3,3 kg.m-2), underwent biochemical exams to assess seric levels of leptin and adiponectin after 12-hours fasting. VO2max assessment based on the 12 minutes’ Cooper Test was 45,0±8,7 ml.kg-1.min-1. Spearman’s correlation analysis was used to examine the association between the variables and wilcoxon test was used to verify the prevalence according to different variables of this study. The significance level was set at p<0,05. Results: In our results there was a significant direct correlation between VO2max and seric levels of leptin (r=0,75). Individuals with BMI<30 showed greater prevalence of adiponectin’s levels above median value to our sample (4,6±1,9 mcg.ml-1) than others. Conclusion: High levels of VO2max are associated with high levels of leptin. In the other hand, high adiponectin levels predicted lower prevalence of BMI>30.

Keywords: Aerobic Power, Leptin, BMI