عنوان مقاله:

Impact of exercise endurance training on pur gene expression and cardiac function

محل انتشار:

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خلاصه مقاله:

Introduction: Endurance training has significant effects on the renewal of heart tissue, including myosin heavy chain (MHC) proteins. On theother side, Purine-rich element-binding protein β (pur) decreases the αMHC gene expression. The aim of this study was to determine theimpact of exercise endurance training on pur gene expression in the heart of Wistar rats.Methods: Fourteen rats have been kept under controlled conditions and after familiarizing with training protocol, they were divided intocontrol groups and experimental groups. The experimental group performed a 10-week treadmill running program for 30 min/day, 5days/week. 48 hours after the last training session, the rats were anesthetized and the heart and their left ventricle were taken out and purexpression was measured using real time PCR method. All data were analyzed using t test.Results: In this study, the results of M-mode echocardiography showed that endurance training led to cardiac hypertrophy. After endurancetraining, the heart weight, especially the left ventricular weight significantly increased. The pur gene expression significantly decreased in theleft ventricular tissue of endurance-trained rats.Conclusion: The results of this study revealed that endurance training has considerable effects on heart size and pur gene expression. Thepur gene also repressed MHC gene expression; it seems that the changes in heart structure related to MHC gene expression.

کلمات کلیدی:

Gene expression, pur gene, Cardiac plasticity, Endurance training