

عنوان مقاله:

The Effect of Six Weeks of Aerobic Exercise on Malondialdehyde and Superoxide Dismutase of Heart Tissue in Rats Poisoned With Steroid Dianabol

محل انتشار:

مجله کشت ها و گردش خون، دوره 2، شماره 4 (سال: 1400)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Sajjad Ramezani - *Department of Physical Education and Sport Sciences, Faculty of Education and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran*

Lotfali Bolboli - *Department of Physical Education and Sport Sciences, Faculty of Education and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran*

Bahman Valinejad - *Department of Physical Education and Sport Sciences, Islamic Azad University, Miyaneh Branch, East Azarbaijan, Iran*

Mohsen Yaqoubi - *Department of Physical Education and Sport Sciences, Faculty of Humanities, Khorramabad, Lorestan, Iran*

خلاصه مقاله:

Background and Aim: Anabolic steroids cause damage to various tissues, including the heart. This study aimed to evaluate the effect of aerobic exercise on Malondialdehyde (MDA) and superoxide dismutase (SOD) of heart tissues in rats poisoned with the anabolic steroid Dianabol. Materials and Methods: In this experimental-fundamental study, 18 rats were selected and divided into three ϵ -series groups, including normal saline intake (Sh), Dianabol (D), and steroid intake with aerobic exercises (D+RT). For six weeks, the steroid and aerobic exercise groups received 5 mg/kg of Dianabol per day peritoneally, and the steroid aerobic exercise group performed aerobic exercise five sessions per week. Measurement of MDA and SOD gene expression in heart tissue was measured by ELISA. Kolmogorov-Smirnov statistical tests, a 1-way analysis of variance with Tukey post hoc test were used to analyze the results ($P \leq 0.05$). Results: Steroid Dianabol had a significant effect on increasing MDA ($P=0.001$) and decreasing SOD ($P=0.001$) in heart tissue. However, aerobic exercise decreased MDA ($P=0.001$) and increased the SOD antioxidant index ($P=0.000$) in the heart tissue of rats exposed to Dianabol. Conclusion: Anabolic steroids appear to increase oxidative stress indices and decrease antioxidants in heart tissue, while aerobic exercise can improve elevated levels of oxidative stress and decreased levels of antioxidants.

کلمات کلیدی:

Exercise, Malondialdehyde, Superoxide dismutase, Anabolic steroids, Testosterone congeners

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1645913>



