

عنوان مقاله:

The Effect of Regular Aerobic Exercise with Garlic Extract on Heart Apoptosis Regulatory Factors in Chronic Kidney Disease

محل انتشار:

مجله دیابت و چاقی ایران، دوره 9، شماره 1 (سال: 1396)

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خلاصه مقاله:

Objective: Physical activity and herbal medicine can inhibit apoptosis with two different mechanisms. The aim of this study was to assess the combined effect of regular aerobic exercise with garlic extract on heart apoptosis regulatory factors in aged rats with chronic kidney disease. Materials and Methods: In this experimental research, 42 aged male Wistar rats (48-52 weeks) were selected and divided into 6 groups: control, doxorubicin, doxorubicin-salin, doxorubicin-garlic, doxorubicin-exercise, doxorubicin-garlic-exercise (combined). Chronic kidney disease was induced by a single doxorubicin injection (8.5 mg/kg). Swimming training was programmed 3 days/week, 30 min/day for 8 weeks. Both the doxorubicin garlic and combined groups with garlic extract were administered by garlic gavage at a dose of 2.5 g/kg. The renal Bax and Bcl-2 levels were evaluated by ELIZA method. A one-way analysis of variance was used to data analysis (P -value <0.05). Results: The results showed that, 8 weeks swimming training, garlic supplementation and the combination of exercise and garlic extract caused significant Bax increase and Bcl-2 and the ratio Bax/Bcl-2 decrease in heart tissue of aged rats with chronic kidney disease. Conclusion: Based on the results of physical activity and garlic separately induce a protective effect on the heart tissue. But combined interventions did not accelerate the combined effects. Therefore, it is suggested to use them separately

کلمات کلیدی:

Aerobic exercise, Apoptosis, Garlic, Doxorubicin

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