

## عنوان مقاله:

Protective Effect of Diosgenin and Exercise Training on Biochemical and ECG Alteration in Isoproterenol- Induced Myocardial Infarction in Rats

## محل انتشار:

مجله علوم پایه پزشکی ایران، دوره 14، شماره 3 (سال: 1390)

تعداد صفحات اصل مقاله: 11

## نویسندگان:

Afshin Salimeh - *Department of Physiology, Drug Applied Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

Mustafa Mohammadi - *Department of Physiology, Drug Applied Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

Gisou Mohaddes - *Department of Physiology, Drug Applied Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

Reza Badalzadeh - *Department of Physiology, Drug Applied Research Center, Tabriz University of Medical Sciences, Tabriz, Iran*

## خلاصه مقاله:

**Objective(s)** Several studies have reported improved response of exercised hearts to myocardial infarction (MI). This study was aimed to evaluate the preventive role of treadmill exercise and diosgenin on cardiac marker enzymes, thiobarbituric acid reactive substances (TBARS), total antioxidant status (TAS), lipids, and electrocardiographic (ECG) patterns in isoproterenol (ISO)-induced myocardial infarction (MI) in male Wistar rats. **Materials and Methods** One hundred Wistar rats were divided into ten groups: Control rats (C), saline (S), L-cremephor (LC), exercise (E), diosgenin dissolved in L-cremephor (15 mg/kg/day) (D), exercise+ diosgenin (E+D), ISO injected (150 mg/kg) (ISO), exercise + ISO (E+ISO), diosgenin + ISO (D+ISO) and exercise+ diosgenin+ ISO (E+D+ISO). At the end of the experiment all animals anesthetized and blood samples were collected for biochemical estimation and also the ECG patterns were recorded. **Results** Exercise and diosgenin pretreatment significantly decreased the lactate dehydrogenase (LDH) and TBARS level in ISO injected animals. Exercise and diosgenin pretreatment significantly decreased serum total cholesterol and increased high density lipoprotein (HDL-C). ISO-treated rats showed pathological Q waves along with elevated ST segments. The altered electrocardiograms (ECG) of ISO-treated rats were also restored to near normal by diosgenin and exercise, but exercise and diosgenin had synergistic effects. **Conclusion** The present investigation demonstrates that combination of diosgenin and exercise exhibited significant protection against ISO induced electrocardiographical and biochemical changes. The cardioprotective mechanism(s) appear to be through changing lipid metabolism.

## کلمات کلیدی:

Diosgenin, Isoproterenol, Myocardial infarction, Treadmill

## لینک ثابت مقاله در پایگاه سیویلیکا:

