

عنوان مقاله:

Comparison of the Cardiac Structure and Function of Elite Weightlifters and Swimmers

محل انتشار:

مجله گزارش بهداشت و درمان، دوره 2، شماره 4 (سال: 1395)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Rohollah Valizadeh - *Department of Physical Education, Omidiyeh Branch, Islamic Azad University, Omidiyeh, Iran*

Masoud Nikbakht - *Department of Sport Physiology, Shahid Chamran University of Ahvaz, Ahvaz, Iran*

Rahmatollah Khanmohammadi - *Department of Physical Education, Behbahan Branch, Islamic Azad University, Behbahan, Iran*

خلاصه مقاله:

Introduction: Heart is the second major component in the cardiovascular system that is affected by training. The aim of this study was to compare the cardiac structure and function of three groups of swimmers, weightlifters and non-athletes. **Methods:** The study was a causal comparative research. The statistical sample consisted of three groups of 10 including swimmers, weightlifters and non-athletes. Athletes were the elite swimming and weightlifting volunteers who participated voluntarily in this study. Inclusion criteria for athletes included a history of at least 5 years of regular exercise. After selecting the statistical samples, all participants took part in the echo-heart test in which they were given Color Doppler M-Mode echocardiography with coordination of an echocardiologist. For data analysis one way ANOVA and bonferroni test post hoc tests were used. The p-value was defined as $p \leq 0.05$. **Results:** The results showed that LVIDs in the swimmers had a significant decrease ($p = 0.01$) compared to both weightlifters ($p = 0.03$) and non-athletes ($p = 0.02$). However, there was no significant difference between weightlifters and non-athletes ($p = 0.88$). The results also revealed a significant increase in interventricular septal end diastole (IVSd) in the weightlifters compared to the swimmers ($p = 0.02$) and non-athletes ($p = 0.02$). There was no significant difference between left ventricular internal diameter in diastole (LVIDd) ($p = 0.23$), left ventricular mass index (LVMI) ($p = 0.70$), left atrium dimensions (LAD) ($p = 0.06$), aortic root dimension (ARD) ($p = 0.96$), left ventricular posterior wall dimensions (LVPWD) ($p = 0.17$), heart rate (HR) ($p = 0.80$) and ejection fraction (EF) ($p = 0.66$) in the swimmers and weightlifters. **Conclusion:** Different changes in the cardiac structure and function of the swimmers and weightlifters are considered as physiological adjustments, and not cardiomyopathy. On the other hand, despite the different effects of strength and endurance exercises on the structure of the heart muscle, it seems that the cardiac performance of the athletes in the two disciplines are the same.

کلمات کلیدی:

Heart, Swimmers, Weightlifters

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1907856>



