The effect of consumption of Persian medicine diabetes drug and aerobic training on glucose and lipid profiles in overweight women with type II diabetes

Mohsen Akbarpour Beni[a], Narges Jafari[a]*

[a]Department of Sport Sciences, Faculty of Humanities and Literature, University of Qom, Qom, Iran

Abstract:

Background and Purpose: Increasing the prevalence of obesity is one of the main health problems in our country. One of the main side effects of obesity and overweight is type II diabetes. Thus, the aim of this study is to investigate the effect of 6 weeks usage of Persian medicine diabetes drug and aerobic training on glucose and lipid profiles in overweight diabetic women.

Methods and Materials: In this semi-experimental study, 30 overweight women with diabetes type II in Qom city were randomly assigned to four groups of: aerobic training + medicine, aerobic training + placebo, medicine, and control. The aerobic training program was including 6 weeks running with 60-70% of the maximum heart rate. Intended groups received three 800 mg diabetes capsules daily in the morning, afternoon and night after each meal for 6 weeks. Blood samples were collected for pre-test and post-test stages in order to study the variables in fasting condition. Data were analyzed using ANOVA and independent t-test in SPSS software with significant level of $p \leq 0.05$.

Results: The results of this study showed that FBS (fasting blood glucose) from the pre-test to post-test stages significantly decreased in exercise + medicine group ($p = 0.034$), exercise + placebo group ($p = 0.02$) and drug group ($p = 0.009$). Cholesterol levels in the exercise + medicine group ($p = 0.008$), medication group ($p = 0.010$), triglycerides in the training + drug group ($p = 0.011$), LDL in the drug group ($p = 0.043$) and VLDL in the training + drug group ($p = 0.011$) showed a significant decrease from the pre-test to post-test. However, there was no difference between the groups in any of the other factors ($p > 0.05$).

Conclusion: The results of this study showed that 6 weeks aerobic training and use of diabetes drug in women with diabetes type II have a positive effect through different mechanisms in blood glucose and some indexes of lipid profiles, insulin, and insulin resistance.

Keywords: Overweight, Aerobic Exercise, Diabetes Drug, Type II Diabetes, Women, Glucose, Lipid profile

Corresponding Author: m.akbarpoor@qom.ac.ir