

The Effect of Six Weeks Aerobic Training and Taxol Consumption on Interleukin 8 and Plasminogen Activator Inhibitor-1 on Mice with Cervical Cancer

Authors : Alireza Barari, Maryam Firoozi, Maryam Ebrahimzadeh, Romina Roohan Ardeshiri, Maryam Kamarloeei

Abstract : Background: The purpose of this study was to evaluate the effect of six-week aerobic training and taxol consumption on interleukin 8 and Plasminogen Activator Inhibitor-1 (PAI-1) in mice with cervical cancer. Material and method: In this experimental study, 40 female C57 mice, eight weeks old, were randomly divided into 4 groups: cancer, cancer-taxol complement, cancer-training and cancer-training - taxol complement with 10 mice in each group. The implantation of cancerous tumors was performed under the skin of the upper pelvis. The training group completed the endurance training protocol, which included 3 sessions per week, 50 minutes per session, at a speed of 14-18 m/s for six weeks. A dose of 60 mg/kg/day, a pure extract of Taxol was injected peritoneal Data were analyzed by t-test, One-way ANOVA and post hoc Bonferroni's at the significant level $P < 0.05$. Results: The results showed that there was a significant difference between mean values of interleukin-8 ($P < 0.05$, $F = 12.25$) and the plasminogen activator inhibitor-1 ($P < 0.05$, $P = 0.10737$) in four groups. A significance level of less than 0.05 in Tukey test for both variables also showed a significant difference between the "control" group and the complementary "exercise" group. Namely, six weeks of aerobic training, along with taxol, have a significant effect on the level of plasminogen activator inhibitor-1 and interleukin-8 mice with cervical cancer. Conclusion: Considering the effect of training on these variables, this type of exercise can be used as a complementary therapeutic approach along with other therapies for cervical cancer.

Keywords : cervical cancer, taxol, endurance training, interleukin 8, plasminogen activator inhibitor-1

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