

The Effect of Endurance Training and Taxol Consumption on Cyclooxygenase-2 and Prostaglandin E2 Levels in the Liver Tissue of Mice with Cervical Cancer

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Abstract : Background: Herbs have a strong anti-cancer effect. Also, exercise is one of several lifestyle factors known to lower the risk of developing cancer. The aim of this study was to investigate the effect of endurance training and taxol on cyclooxygenase-2 and prostaglandin E2 in the liver tissue of mice with cervical cancer. Materials and Methods: In this experimental study, 35 female C57 mice were randomly divided into 5 groups (n=7 in each group): control (healthy), control (cancer), complement (cancer), training-supplementary (cancer) and training (cancer). 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 of pure taxol was injected intra peritoneally. The dependent variables of this study were measured 24 hours after the last training session by ELISA. Results: The results showed that the use of taxol and endurance training reduced the levels of cyclooxygenase-2 and prostaglandin E2 in the liver tissues of C57 mice with cervical cancer. Conclusion: Induction of the cancerous tissue in mice with cervical cancer increases the levels of cyclooxygenase-2 and prostaglandin E2 and endurance training along with taxol may reduce these levels.

Keywords : cervical cancer, taxol, endurance training, cyclooxygenase-2, prostaglandin E2

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