Physical Activity and Breast Cancer Prevalence: A Case-Control Study in Arak, Iran (2017-2018)

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Abstract

Introduction: Both physical inactivity and breast cancer incidence have increased dramatically during the last two decades in Iranian women. The purpose of this study was to investigate the association of physical activity with breast cancer incidence in premenopausal women.

Methods: In this case-control study, which was performed from March 2017 to May 2018, 150 incident cases with histological confirmation of breast cancer and 146 age-matched controls were recruited (aged 20-55 years). The patients were selected from Ayatollah Khonsari hospital in Arak, Iran. Height and weight were measured by standard methods and used for calculation of body mass index. Demographics, fertility status, and physical activity level were obtained by interview using valid questionnaires. Data were analyzed using descriptive statistics and logistic regressions on SPSS 18.

Results: Household activities accounted for about 78% of the total lifetime physical activities. Only about 2.5% of the total lifetime physical activities were in the form of recreational/sports. The results of logistic regressions showed that except for the common risk factors for breast cancer (older marital age, family history of breast cancer, and smoking), occupational activities, transportation activities, recreational/sport activities, and total lifetime physical activities had a protective effect against breast cancer incidence in young women.

Conclusion: These findings suggest that lifestyle factors such as physical inactivity are risk factors associated with the incidence of premenopausal breast cancer in Arak.

Keywords: Arak, Breast Cancer, Physical Activity, Lifestyle-related Factors