PHYSICAL ACTIVITY LEVELS IN WOMEN WITH BRCA 1/2 MUTATIONS

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INTRODUCTION:
The BRCA 1/2 mutations are the most known typologies of hereditary breast cancer (BC). Studies have provided among women carrying these mutations preliminary evidence of a protective role of PA against BC, particularly during adolescence or early adulthood. Data from the German LIBRE study confirmed a significantly lower BC prevalence in women who reported higher PA during their adolescence [1, 2]. In addition, the WISER trial on healthy pre-menopausal women at high risk of BC showed that exercise raised adiponectin and lowered leptin, controlling for a change in body fat and suggesting the importance of adipokines in BRCA penetrance [3]. Aim of the present study was to investigate the role of PA on BC risk factors in women carrying BRCA 1/2 mutations.
METHODS:
Data analysis involved 63 women (47.6±12.4yrs) with BRCA 1/2 mutations in care at Fondazione IRCCS Istituto Nazionale dei Tumori, Milan. The participants filled in Godin-Shepard Leisure-Time Physical Activity Questionnaire for the evaluation of the PA levels. Moreover, they underwent to anthropometric, metabolic, and blood sample evaluations. Data were analyzed with SPSS version 27.
RESULTS:
The women were classified as active (n=22) and inactive (n=41). Insulin levels were found significantly lower in active women compared to the inactive group ($p<.05$); there were no differences for the other variables analyzed.
The correlation analysis on the entire sample showed that higher PA levels are significantly correlated with a lower weight ($r2=-0.26$, $p<.05$), lower BMI ($r2=-0.30$, $p<.05$), lower hip circumference ($r2=-0.30$, $p<.05$), lower triglycerides ($r2=-0.28$, $p<.05$), lower fat mass in % ($r2=-0.31$, $p<.05$) and lower fat mass in kg ($r2=-0.28$, $p<.05$).

CONCLUSION:
These findings suggest that higher levels of PA can play an important and protective role against BC. Structured PA interventions are useful for developing new strategies that could provide a tool for modulate the penetrance of hereditary BC.
References:
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