Title

Effect of physical activity on the relationship between adiposity and cardiac autonomic modulation in female breast cancer survivors: a longitudinal study

Abstract

This longitudinal study aimed to analyze the influence of physical activity (PA) on the relationship between body adiposity and cardiac autonomic modulation (CAM) in women survivors of breast cancer. We collected body adiposity through electrical bioimpedance considering body fat percentage (BFP), CAM through heart rate variability (considering RMSSD, SDNN, PNN50, LF (m2), HF (m2), SD1 indexes and SD1/SD2 ratio) and PA through a questionnaire in 64 participants (58.0 ± 9.6 years), recruited through the local association of support for breast cancer and by direct indications from city mastologists. After insertion of PA into the multivariate statistical model, significant attenuation was observed in the relationship between body adiposity and CAM for the indices: SDNN (β = −0.94; 95 percent CI: −1.93; 0.04; p =.060) and SD1/SD2 (β = −0.01;95 percent CI = −0.02; 0.001; p =.065). In conclusion, it was observed that PA was able to mitigate the relationships between BFP and CAM (considering SDNN index and SD1/SD2 ratio) in breast cancer survivors.

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