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Heart rate variability and the use of complementary therapies in breast cancer survivors

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The same aggressive treatments that have led to a reduction in the breast cancer may also have adverse effects on cardiac autonomic balance. The cardiotoxic effects of oncologic treatments may affect vagal activity and therefore influence cardiac autonomic balance. There appears to be a bidirectional relationship between autonomic imbalance and cancer. Heart rate variability (HRV) is an important non-invasive index of vagal-nerve response and a potential stress marker. It may also be a useful test for autonomic imbalance. The index represents the time differences between beat-to-beat intervals, synonymous with RR variability. Research has shown that adjuvant cancer treatments reduce HRV values after surgery, radiotherapy and chemotherapy. We have observed the presence of a cardiovascular imbalance in a descriptive case-controlled study with 22 breast cancer survivors during the first year post treatment in comparison to 22 healthy age-matched controls, evidenced by a higher resting heart rate and lower values for HRV time domains (SDNN, RMSSD, HRV index) and the high band (HF) of the HRV frequency domain. If further study confirms that HRV is a clinically useful tool to detect cardiovascular disease and predict prognosis in early-stage breast cancer survivors, various nonpharmacological therapies that improve altered cardiovascular balance may then be available for use among these patients. These therapies include manual therapy, reiki, physical exercise, relaxation exercises (e.g., guided imagery), meditation, yoga and controlled breathing.

Biography

Díaz Rodríguez is Nurse and has completed her PhD at the age of 30 years from University of Granada. She is a lecturer in the Department of Nursing of the Faculty of Health Sciences from 2007. She has published 40 papers in reputed journals and has been serving as a reviewer of different journals.

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