Abstract #3093

EFFECTS of Mindfulness BASED Stress REDUCTION (MBSR) ON LYMPHOCYTE RECOVERY AFTER BREAST CANCER TREATMENT

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Abstract Text:

Introduction: Few data exist on immune recovery following breast cancer treatment, as well as the extent to which MBSR(BC) impacts lymphocyte subsets, T cell activation, and production of T helper 1 (Th1; IFNγ) and T helper 2 (Th2; IL-4) cytokines.

Methods: The two-armed RCT randomized 84 female breast cancer survivors (stages 0-III, who recently had a lumpectomy, radiation, and/or chemotherapy) to either a 6-week MBSR(BC) program (n=41) or a wait-listed usual care regimen (n=43). Immune cell measures were assessed at baseline and within 2 weeks after the 6-week intervention, including number and percentages of lymphocyte subsets, activated T cells, and Th1 and Th2 cells in peripheral blood samples, as determined by intracellular immunostaining and flow cytometry.

Results: Eighty-two women, mean age of 58 years (SD 9.4) completed the study; 63 (75%) were Caucasian. The majority (70%) were treated for Stage 0/I cancer and 61% were treated with lumpectomy and radiation (no chemotherapy). Spearman correlations showed that time since treatment completion was associated with immune recovery. B and NK cells were more susceptible to suppression by cancer treatment compared to T cells. Compared to Usual Care, patients assigned to MBSR had their T cells more readily activated by the mitogen PHA (p=0.003); and had an increase in the Th1/Th2 ratio (p=0.03) if entered into the study beyond 12 weeks after their cancer treatment.

Conclusions: Among breast cancer survivors, MBSR (BC) influences a more rapid recovery of functional T cells capable of being activated by mitogen with the Th1 phenotype. In contrast, the recovery of B cells and NK cells after completion of cancer treatment appears to occur independent of stress-reducing interventions, such as MBSR. In addition, chemotherapy treatment appears to have a negligible effect when paired with radiation on the quantitative and qualitative aspects of peripheral lymphocyte recovery following treatment.

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Cecile A. Lengacher
Biography: Research Background Dr. Cecile Lengacher’s program of research is in the area of women’s health, and oncology, psychoneuroimmunology, complementary therapies and breast cancer (guided imagery and mindfulness based stress reduction), and role strain. Her current research focuses on the use of complementary/alternative therapies in women with breast cancer and effects on the immune system. She has been funded for an R-21 to test the effectiveness of mindfulness based stress reduction (MBSR) (in women diagnosed with breast cancer who are in transition from treatment to survivor) on selected psychosocial and immune parameters. In addition, she has been funded by the H. Lee Moffitt Cancer Center and Research Institute to examine the effectiveness of an MBSR tape program for advanced stage cancer patients and their caregivers. Other areas of her research is development and testing of instruments, such as the “Use of Complementary/Alternative Therapies Survey” and the “Working Women’s Role Strain Inventory.” Scholarly Activities Dr. Lengacher has authored or co-authored over 100 journal articles, conference papers, books and book chapters. She served as a program evaluator for the National League for Nursing Accrediting Commission, collateral grant reviewer for Sigma Theta Tau International, grant reviewer for Oncology Nursing Society and served as Chairperson of the International Dissertation Awards and Grant Foundation Awards, Sigma Theta Tau International. She serves as a reviewer for the following Journals: Oncology Nursing Forum, Biological Nursing Research, Nursing Measurement, International Journal for Complementary Therapies in Medicine, Biomedicalcentral, Medical Science Monitor, Holistic Nursing Practice, Nursing Education. Dr. Lengacher is also a member of several professional organizations: Psychosocial Oncology Society, American Nurses Association, National League for Nursing, Oncology Nursing Society, Sigma Theta Tau International, International Network of Doctoral Education in Nursing, and Southern Nursing Research Society.

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