

Guided Imagery Up-Regulates Anti-Cancer Defenses in Breast Cancer Patients

Monday, 19 January 2009

Researchers from United Lincolnshire Hospitals and Queen's Medical Centre in the UK performed a randomized, controlled trial to evaluate the immuno-modulatory effects of relaxation training and guided imagery on 80 women with breast cancer.

Patients underwent chemotherapy followed by surgery, radiotherapy, and hormone therapy. Those in the intervention group were taught relaxation and guided imagery. Patients kept diaries of the frequency of relaxation practice and imagery vividness.

On 10 occasions during the 37 weeks following the diagnosis, blood was taken for immunological assays CD phenotyping the following: T cell subsets (helper, cytotoxic), natural killer (NK) and lymphokine activated killer (LAK) cells, B lymphocytes and monocytes; cytotoxicity: NK and LAK cell activities; cytokines interleukin 1 beta (1beta), 2, 4 and 6 and tumour necrosis factor alpha.

Significant between-group differences were found in the number of CD25+ (activated T cells) and CD56+ (LAK cell) subsets. The number of CD3+ (mature) T cells was significantly higher following chemotherapy and radiotherapy for patients in the relaxation and guided imagery group.

Using a median split, women who assessed their imagery ratings highly had elevated levels of NK cell activity at the end of chemotherapy and at follow-up. Significant correlations were obtained between imagery ratings and baseline corrected values for NK and LAK cell activity, and IL1beta. Relaxation frequency correlated with the number of CD4+ (T helper) cells, the CD4+:8+ (helper:cytotoxic) ratio, and IL1beta levels.

The study concludes that relaxation training and guided imagery beneficially altered putative anti-cancer host defenses during and after multimodal therapies.

Citation: Eremin O, Walker MB, Simpson E, Heys SD, Ah-See AK, Hutcheon AW, Ogston KN, Sarkar TK, Segar A, Walker LG. Immuno-modulatory effects of relaxation training and guided imagery in women with locally advanced breast cancer undergoing multimodality therapy: A randomised controlled trial. Breast. 2008. Nov 11. [Epub ahead of print]