

Short communication

Benefits of complementary therapies

Caroline Hoffman

Breast Cancer Haven, Effie Road, London, SW6 1TB, UK

Corresponding author: Caroline Hoffman, cjh@breastcancerhaven.org.uk

Published: 20 December 2007

This article is online at <http://breast-cancer-research.com/content/9/S2/S9>

© 2007 BioMed Central Ltd

Breast Cancer Research 2007, **9(Suppl 2):S9** (doi:10.1186/bcr1807)

Introduction

This paper examines the benefits of complementary therapies, as supported by research evidence, in patients with breast cancer. Complementary therapies are those therapies and approaches used alongside medical treatment for breast cancer to support the patient on their cancer journey. It should be added that an integrated approach to cancer care includes the best of the orthodox medical treatments and the best evidence-based, supportive complementary modalities.

The benefits of complementary therapies to help with the side effects of conventional breast cancer treatment are examined in the following areas: pain and surgery, chemotherapy, radiotherapy, hormonal treatments, and psychoemotional and survival issues. Potential interactions between nonprescription medicines and cancer treatments and cost-effectiveness is also touched upon.

Although it is recognized in many of these areas larger and more rigorous trials must be performed, this paper hopes to give some indication of areas in which further research is warranted.

Pain and adverse effects from surgery

Pain, particularly postoperatively, may be ameliorated with complementary therapies. Reiki has been found to be helpful in pain control (1 to 4 days) in cancer patients [1], whereas acupuncture increases pain relief and improves arm movement after surgery [2]. Massage and acupuncture can help to decrease pain and depressive mood [3], and ear acupuncture decreases pain intensity [4]. Hypnotic-type methods involving relaxation, suggestion and imagery, as well as support groups and healing touch, have some impact on cancer pain [5,6], and hypnosis decreases pain intensity, unpleasantness, discomfort, nausea, fatigue and emotional upset after surgery for breast cancer [7].

Side-effects of chemotherapy

Chemotherapy's unpleasant short-term and long-term side-effects may be ameliorated by using complementary therapies. Nausea and vomiting is eased by stimulation to the

P6 point using acupuncture [8] and acupressure when self-administered [9], but not as well by wrist bands applied to that point [10,11]. Pain, mood disturbance and fatigue were improved by massage and healing touch [12], whereas reflexology lessened anxiety regarding chemotherapy [13].

Group relaxation with guided imagery reduced fatigue and improved sleep difficulties, whereas cognitive behavioural group intervention reduced external health locus of control [14]. Anthroposophic mistletoe extracts can improve quality of life and reduce side-effects of chemotherapy [15]. Mucositis can be lessened by slippery elm, but this is only supported by case study evidence and traditional use.

Side-effects of radiotherapy

There is some evidence that complementary therapies can help with the side-effects of radiotherapy. Fatigue can be reduced and sleep improved by relaxation and guided imagery, whereas cognitive behavioural group intervention helped reduce external health locus of control [14]. Anthroposophic mistletoe extracts can also improve quality of life and reduce side-effects from radiotherapy [15]. Herbal skin gels such as aloe vera warrant further study, because mixed findings have been reported regarding their benefit in helping to protect and heal skin following radiotherapy [16,17].

Homeopathic remedies of X-ray and belladonna aided skin recovery beyond placebo after completion of radiotherapy [18]. A variety of homeopathy remedies were found to be helpful in managing skin itching [19].

Side-effects from hormonal treatments

Patients with menopausal symptoms from the use of hormonal treatments often turn to complementary therapies for help with side-effects. Hot flushes can be relieved by acupuncture [20] and electro-acupuncture [21]. Psychological well being improved alongside vasomotor symptoms for women treated with applied relaxation or electro-acupuncture [20]. Improvements in the quality of sleep were reported with participation in an 8-week mindfulness-based stress reduction programme [22].

Psychoemotional issues

Psychoemotional and social support is recognized as being important to recovery from breast cancer. In addition to recognized psychological interventions, complementary therapies and meditation interventions can be useful.

Hypnosis reduces emotional upset in breast surgery patients [7]. Aromatherapy and massage can offer short-term benefits in terms of psychological well being and anxiety, depression, relaxation, sleep, body image and possibly physical symptoms [23-25]. Reflexology can provide some psychological and physical support, as well as decreasing anxiety and pain [13,26]. There is a review of reflexology's role in symptom relief in progress.

The 8-week mindfulness-based stress reduction programme has been shown to help with mood state, stress and cortisol levels in cancer outpatients [27,28].

Interactions between non-prescription medicines and cancer treatments

It is clear that significant numbers of patients with cancer, including those with breast cancer, are using nonprescription drugs such as herbal medicines to support them, but many do not tell their doctors [29]. From a meta-analysis conducted by Weiger and coworkers [30], 28% of American cancer patients were at risk for detrimental interactions between chemotherapy and herbal/vitamin therapy. Review articles have specifically examined interactions between herbal medicines and prescription drugs [31] but only one in relation to anticancer agents [32]. This review examined herbs with the potential to modulate significantly the activity of drug-metabolizing enzymes, notably cytochrome P450 isozymes. These include garlic, ginkgo, echinacea, ginseng, St John's wort and kava. All of these products participate in potential pharmacokinetic interactions with anticancer drugs.

The evidence for use of antioxidants during chemotherapy and radiotherapy is confusing and unclear, and awaits suitable trials [33]. In the absence of this evidence, patients should be advised to refrain from high intake of antioxidants, for example vitamins C and E, beyond the recommended daily allowance while they are receiving these treatments.

There is a case for well qualified and experienced complementary therapists, including medical herbalists and nutritional experts, who are knowledgeable about potential interactions to be working in integrated breast cancer care, using the model such as that of the UK-registered charity Breast Cancer Haven, which offers support, information and complementary therapies. More worrying is the fact that health food shop employees are recommending herbal preparations to women with breast cancer with insufficient knowledge of potential interactions. It is a challenge for allopathic and complementary practitioners to establish which of these many potential interactions are clinically relevant [29]. It is recom-

mended that oncologists be familiar with potential interactions between cancer treatments and nonprescription drugs, and to enquire actively regarding any nonprescription medications that their patients may be taking.

Cost-effectiveness

Only one US cost-effectiveness study in complementary therapies used in breast cancer currently exists [7], showing that the benefits of hypnotherapy in breast surgery patients included reduced institutional costs (procedures, medications and staff). There is an urgent need for more research here.

Conclusion

The majority of complementary therapies commonly used by breast cancer patients are both beneficial and safe when they are offered by well qualified and experienced professionals in an integrated way with ongoing cancer treatment. Complementary therapies can help to reduce the distress of symptoms and side-effects associated with breast cancer and its treatments, as well as the psychoemotional aspects of coping with this traumatic experience.

Areas in which particular vigilance is needed on the part of both medical staff and complementary therapists is the area of ingested medicines, such as herbal medicines and antioxidants. Patients seeking complementary therapies where there is no evidence to suggest any positive benefit should be informed of this fact and dissuaded from their use.

Recommendations

There is an urgent need to prioritize high-quality research into complementary therapies in breast cancer care because patients will continue to pursue these avenues for support. Cost-effectiveness analyses should be included.

The remit of the National Cancer Research Institute's Complementary Therapies Clinical Studies Development Group is to build a portfolio of high-quality research studies into complementary therapies in cancer.

All breast care health professionals must be aware of research evidence in the area of complementary breast cancer care, and should ensure that this information is available to patients.

Provision of these therapies should always be of the highest professional standard and offered in an integrated manner, using well developed, existing models.

Acknowledgement

This article has been published as part of Breast Cancer Research Volume 9 Supplement 2, 2007: Controversies in Breast Cancer. The full contents of the supplement are available online at <http://breast-cancer-research.com/supplements/9/S2>.

References

1. Olson K Hanson J, Michaud M: **A phase II trial of reiki for the management of pain in advanced cancer patients.** *J Pain Symptom Manage* 2003, **26**:990-997.

2. He JP, Friedrich M, Ertan AK, Muller K, Schmidt W: **Pain-relief and movement improvement by acupuncture after ablation and axillary lymphadenectomy in patients with mammary cancer.** *Clin Exp Obstet Gynecol* 1999, **26**:81-84.
3. Mehling WE, Jacobs B, Acree M, Wilson L, Bostrom A, West J, Acquah J, Burns B, Chapman J, Hecht FM: **Symptom management with massage and acupuncture in postoperative cancer patients: a randomised controlled trial.** *J Pain Symptom Manage* 2007, **33**:258-266.
4. Alimi D, Rubino C, Pichard-Léandri E, Femand-Brulé S, Dubreuil-Lemaire ML, Hill C: **Analgesic effect of auricular acupuncture for cancer pain: a randomized, blinded, controlled trial.** *J Clin Oncol* 2003, **21**:4120-4126.
5. Mundy EA, DuHamel KN, Montgomery GH: **The efficacy of behavioral interventions for cancer treatment-related side effects.** *Semin Clin Neuropsychiatry* 2003, **8**:253-275.
6. Bardia A, Barton DL, Prokop LJ, Bauer BA, Moynihan TJ: **Efficacy of complementary and alternative medicine therapies in relieving cancer pain: a systemic review.** *J Clin Oncol* 2006, **24**:5457-5464.
7. Montgomery GH, Bovbjerg DH, Schnur JB, David D, Goldfarb A, Weltz CR, Schechter C, Graff-Zivin J, Tatrow K, Price DD, et al.: **A randomized clinical trial of a brief hypnosis intervention to control side effects of breast cancer surgery patients.** *J Natl Cancer Inst* 2007, **99**:1304-1312.
8. Ezzo J, Vickers A, Richardson MA, Allen C, Dibble SL, Issell B, Lao L, Pearl M, Ramirez G, Roscoe JA, et al.: **Acupuncture-point stimulation for chemotherapy-induced nausea or vomiting. Review and meta-analysis.** *J Clin Oncol* 2005, **23**:7188-7198.
9. Klein J, Griffiths P: **Acupressure for nausea and vomiting in cancer patients receiving chemotherapy.** *Br J Comm Nurs* 2004, **9**:383-387.
10. Molassiotis A, Helin AM, Dabbour R, Hummerston S: **The effects of P6 acupressure in the prophylaxis of chemotherapy-related nausea and vomiting in breast cancer patients.** *Complement Ther Med* 2007, **15**:3-12.
11. Roscoe JA, Matteson SE, Morrow GR, Hickok JT, Bushunow P, Griggs J, Qazi R, Smith B, Kramer Z, Smith J: **Acustimulation wrist bands are not effective for the control of chemotherapy-induced nausea in women with breast cancer.** *J Pain Symptom Manage* 2005, **29**:376-384.
12. Post-White J, Kinney ME, Savik K, Gau JB, Wilcox C, Lerner I: **Therapeutic massage and healing touch improve symptoms in cancer.** *Integr Cancer Ther* 2003, **2**:332-344.
13. Stephenson NL, Weinrich SP, Tavakoli AS: **The effects of foot reflexology on anxiety and pain in patients with breast and lung cancer.** *Oncol Nurs Forum* 2000, **27**:67-72.
14. Cohen M, Fried G: **Comparing relaxation training and Cognitive-Behavioural group therapy for women with breast cancer.** *Res Social Work Pract* 2007, **17**:313-323.
15. Kienle GS, Kiene H: **Complementary cancer therapy: a systematic review of prospective clinical trials on anthroposophic mistletoe extracts.** *Eur J Med Res* 2007, **12**:103-119.
16. Williams MS, Burk M, Loprinzi CL, Hill M, Schomberg PJ, Nearhood K, O'Fallon JR, Laurie JA, Shanahan TG, Moore RL, et al.: **Phase III double-blind evaluation of an aloe vera gel as a prophylactic agent for radiation-induced skin toxicity.** *Int J Radiat Oncol Biol* 1996, **36**:345-349.
17. Olsen DL, Raub W Jr, Bradley C, Johnson M, Macias JL, Love V, Markoe A: **The effect of aloe vera gel/mild soap versus mild soap alone in preventing skin reactions in patients undergoing radiation therapy.** *Oncol Nurs Forum* 2001, **28**:543-547.
18. Balzarini A, Felisi E, Martini A, De Conno F: **Efficacy of homeopathic treatment of skin reactions during radiotherapy for breast cancer: a randomised, double blind clinical trial.** *Br Homeopath J* 2000, **89**:8-12.
19. Schlappack O: **Homeopathic treatment of radiation-induced itching in breast cancer patients. A prospective observational study.** *Homeopathy* 2004, **93**:210-215.
20. Smith J, Richardson J, Filshie J, Thomas R, Moir F, Pilkington K: **Acupuncture for hot flushes as a result of cancer treatment: a systematic review.** In *Complementary and Alternative Medicine Evidence Online (CAMEOL) Database* 2005 [<http://www.rccm.org.uk/comeol>]
21. Nedstrand E, Wijma K, Wyon Y, Hammar M: **Vasomotor symptoms decrease in women with breast cancer randomised to treatment with applied relaxation or electroacupuncture: a preliminary study.** *Climacteric* 2005, **8**:243-250.
22. Shapiro SL, Bootzin RR, Figueredo AJ, Lopez AM, Schwartz GE: **The efficacy of mindfulness-based stress reduction in the treatment of sleep disturbance in women with breast cancer. An exploratory study.** *J Psychosom Res* 2003, **54**:85-91.
23. Fellowes D, Barnes K, Wilkinson S: **Aromatherapy and massage for symptom relief in patients with cancer.** *Cochrane Database Syst Rev* 2004, **3**:CD002287.
24. CAMEOL: **Cancer (general): Aromatherapy: a review of the research evidence on the effectiveness of aromatherapy and/or massage for cancer symptom management.** In *Complementary and Alternative Medicine Evidence Online (CAMEOL) Database* [<http://www.rccm.org.uk/comeol>]
25. Wilkinson SM, Love SB, Westcombe AM, Gambles MA, Burgess CC, Cargill A, Young T, Maher EJ, Ramirez AJ: **Effectiveness of aromatherapy massage in the management of anxiety and depression in patients with cancer: a multicenter randomized controlled trial.** *J Clin Oncol* 2007, **25**:532-539.
26. Fellowes D, Gambles M, Lockhart-Wood K, Wilkinson S: **Reflexology for symptom relief in patients with cancer. (Protocol.)** *Cochrane Database Syst Rev* 2000, CD002917. DOI: 10.1002/14651858.CD002917.
27. Speca M, Carlson LE, Goodey E, Angen M: **A randomised, wait-list controlled clinical trial: the effect of mindfulness meditation based stress reduction programme on mood and symptoms in cancer outpatients.** *Psychosom Med* 2000, **62**:613-622.
28. Carlson LE, Speca M, Kamala DP, Goodey E: **Mindfulness-based stress reduction in relation to life, mood, symptoms of stress and levels of cortisol, dehydroepiandrosterone-sulphate (DHEAS) and melatonin in breast and prostate cancer outpatients.** *Psychoneuroendocrinology* 2004, **29**:448-474.
29. McCune JS, Hatfield AJ, Blackburn AA, Leith PO, Livingston RB, Ellis GK: **Potential of chemotherapy-herb interactions in adult cancer patients.** *Support Cancer Care* 2004, **12**:454-462.
30. Weiger WA, Smith M, Boon H, Richardson MA, Kaptchuk TJ, Eisenberg DM: **Advising patients who seek complementary and alternative medical therapies for cancer.** *Ann Intern Med* 2002, **137**:889-903.
31. Izzo AA, Ernst E: **Interactions between herbal medicines and prescribed drugs: a systematic review.** *Drugs* 2001, **61**:2163-2175.
32. Sparreboom A, Cox MC, Acharya MR, Figg WD: **Herbal remedies in the United States: potential interactions with anti-cancer agents.** *J Clin Oncol* 2004, **22**:2489-2503.
33. D'Andrea GM: **The use of antioxidants during chemotherapy and radiotherapy should be avoided.** *CA Cancer J Clin* 2005, **55**:319-321.