

Using acupuncture as part of a comprehensive program in helping patients with breast cancer beyond fatigue

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Although prior small-scale randomized controlled trials have shown the potential of acupuncture in effectively managing cancer-related fatigue (CRF) after chemotherapy (1), the study by Molassiotis *et al.* (2) is the first large, multi-site trial examining this question. In their study, 302 outpatients with breast cancer experiencing persistent long-term fatigue were assigned to one of two groups: usual care, consisting of an information booklet related to fatigue, or acupuncture plus usual care. In the acupuncture treatment group, acupuncture were standardized 20-min sessions that consisted of needling three acupoints (ST36, SP6, LI4) with the addition of alternate points chosen by the therapists to reflect real, individualized Chinese medical practice. The primary outcomes related to general fatigue were measured through self-reports by patients using the Multidimensional Fatigue Inventory (MFI) at 6 weeks. Mental fatigue, activity, and motivation, anxiety and depression, and quality of life were also measured. Results found significant improvements on all measured outcomes for the acupuncture plus usual care group. The study thus demonstrated acupuncture's effect on the successful management of clusters of symptoms rather than single symptoms alone. The investigators suggest that future studies should include an active control arm such as education, alongside a no treatment or wait-list arm, such that the nonspecific effects of acupuncture can also be evaluated. Bower (3) elaborated further on the Molassiotis study by addressing the need to determine an optimal acupuncture protocol for treating CRF, and pointed to the potential of including other promising nonpharmacologic treatments to enhance long-term effects. We applaud the study team for conducting a trial of this magnitude and significantly advancing scientific knowledge in this

field. In this editorial, we would like to contribute to this important discussion by sharing our own clinical approach at the UCLA Center for East-West Medicine (CEWM). We begin with a discussion of acupuncture treatment for fatigue, using this as a springboard for a broader invitation to consider the ways in which an integrative East-West health model, such as that in place at CEWM, can be used to create a unique system of person-centered care that is also able to address multiple problems simultaneously.

Fatigue is a major problem in the clinical setting and has garnered much interest among patients and physicians, particularly palliative care experts. Breast cancer survivors, with an overall CRF prevalence of 48%, frequently report never returning to their pre-diagnosis energy level, a change which significantly diminishes their quality of life (4). There is currently no gold standard in the treatment for CRF, as it is understood to be a multifactorial condition (5). Combination therapy is therefore needed to address the multiple components that affect patients with this condition (6). Pharmaceutical approaches in general aim at specific etiology, but in this instance tend not to address the pathophysiology that is the root of the problem. People are becoming drawn towards more non-drug approaches and individualized care through complementary and alternative medicine (CAM) and integrative medicine approaches (7,8).

The Center for East-West Medicine (CEWM) is an organized unit within the Department of Medicine at UCLA. For two decades, CEWM clinicians who are dual-trained in biomedicine and traditional Chinese medicine (TCM) see thousands of patients with a multitude of refractory problems, referred by over 500 physicians both within and beyond the UCLA health system. The TCM theoretical construct of conceptualizing the whole person is

fundamental in formulating a personalized treatment plan that draws upon multiple modalities in order to address dysregulations within multiple systems of the body (9). The treatment plan may therefore entail educating the patient on how to better cope with emotions, manage stress, participate in appropriate exercise, or use a blended East-West nutrition approach to enhance and personalize their diet according to their condition (10). We furthermore refer our patients to our educational web portal for yet more detailed information (11). Acupuncture, along with acupuncture-like stimulation based on patient preference, is a major therapeutic component in our East-West toolbox. Recently, much research has been done evaluating the mechanisms and efficacy and effectiveness of CAM modalities, including especially acupuncture, in relieving symptoms and improving health-related quality of life in patients with breast cancer and breast cancer survivors (12-15). The recent literature supports acupuncture's effect on the limbic system (16), showing that it is particularly effective—and safe—in addressing the inflammatory cascade induced by stress (17-20). This combination of efficacy and safety for the management of multiple pathways related to the inflammatory cascade is part of the beauty of this technique, which is why we employ it at our clinic as part of our comprehensive approach for patients who come in with fatigue and other concomitant problems, including insomnia, anxiety, depression, and pain. Acupoints used at our clinic that are also taught to our patients when applying acupressure are the most commonly used points clinically and were employed in the aforementioned limbic brain network studies as well as the Molassiotis et al article. For patients who prefer not to use needles, similar therapeutic effects have been found with acupuncture-like stimulation using heat, electricity, and massage. When combining acupuncture with other therapies, we find that there are minimal adverse interactions. Fatigue and its contributing factors are addressed, and continuing drug use often may no longer be required or be minimized. In general, acupuncture and non-pharmacological therapies are not used like a drug that has specific effects, but instead treat the whole person through non-specific, multi-targeted effects that work to re-regulate the body (21).

We have done a number of small-scale studies and have written several articles detailing the effectiveness and applicability of this multi-modality, person-centered approach (22,23). We encourage future, larger-scale research that moves toward a more in-depth examination of this approach, and are particularly inspired by recent

innovations in clinical research methods, especially developments in Whole Systems Research (WSR) and multi-method approaches that incorporate qualitative inquiry [see, e.g., (24)]. With this type of inquiry, we can not only learn about the ways in which acupuncture and more broadly TCM and integrative East-West medicine can maximize treatment efficacy, but also learn how to improve upon treatment effectiveness, such as in refining communication about CAM between patients and providers (25) or contributing to patient's improved health-related quality of life through the incorporation of multiple modalities. In this short editorial, we therefore seek to provide readers with some “food for thought,” in hopes that some of what we have touched upon resonates with you as we all work together to build a better health system that is evidence-based, yet also safe, accessible, patient-centered, and cost-effective.

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