

# Needling the Pain of Peripheral Neuropathy

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SAN ANTONIO — For patients with breast cancer who have chemotherapy-induced peripheral neuropathy (CIPN), acupuncture may provide relief where other approaches have failed, according to a pilot study presented as a poster at the San Antonio Breast Cancer Symposium (SABCS) 2016.

"We were pleasantly surprised at how strong the effect was, especially in these women who had been suffering with this for years," said senior investigator Jennifer Ligibel, MD, from the Dana Farber Cancer Institute in Boston, Massachusetts.

"There are not many effective treatments available," added lead author and acupuncture specialist Wiedong Lu, MB, MPH, PhD, from the same institution.

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Up to 97% of patients with breast cancer develop some degree of peripheral neuropathy during cancer therapy, particularly taxane-based treatment, and in roughly 30% the symptoms persist, said Dr Ligibel.

"Unfortunately for many women it is a problem that doesn't go away and there are not many effective therapies. There was a recent study looking at duloxetine but it only had effectiveness for the painful part of neuropathy whereas there are many different components of neuropathy, such as diminished sensation and changes in hot and cold sensitivity."

"Some studies from China suggest acupuncture might be helpful, but they are not focused on breast cancer and are mostly in diabetes and other types of neuropathy," added Dr Lu.

The study randomly assigned 40 patients with taxane-induced peripheral neuropathy ranging from a duration of 1.4 to 92.4 months to receive acupuncture therapy or usual care.

"The acupuncture was delivered for 8 weeks, on average twice a week, and usual care consisted of follow-up by their regular doctor without any particular intervention," explained Dr Lu.

All acupuncture was delivered according to a standardized protocol, with the addition of electrostimulation.

Overall, pain measures improved 33% and functional assessment improved 35% in the acupuncture group compared with controls, said Dr Ligibel.

The results were based on patient-reported outcomes collected at baseline and 8 weeks on the following:

- Patient Neurotoxicity Questionnaire (PNQ);
- European Organisation for Research and Treatment of Cancer Quality of Life Chemotherapy-Induced Peripheral Neuropathy (EORTC QLQ-CIPN20);
- EORTC Quality of Life Questionnaire-Core 30 (EORTC QLQ-C30); and
- Brief Pain Inventory-Short Form (BPI-SF).

The study found significant differences between groups in the degree of improvement from baseline to 8 weeks.

Patients in the acupuncture group experienced significantly greater improvements in the PNQ summary sensory score (drops of 3.5 vs 2.8 points;  $P = .001$ ); the FACT-NTX summary score (improvements of 8.7 vs 1.2 points;  $P = .002$ ); the EORTC QLQ-CIPN20 score (drops of 67 vs 39.9 points;  $P = .01$ ); and the BFI-SF (drops of 6 vs 3.9 points;  $P = .01$ ).

Asked by *Medscape Medical News* to comment on the findings, Jun Mao, MD, a breast cancer acupuncture specialist from the Integrative Medicine Service at Memorial Sloan Kettering Cancer Center, New York City, said, "CIPN is a huge problem and our group previously found close to 50% of women with breast cancer continue to experience CIPN years after treatment, which is associated with increased falls."

Dr Mao continued: "This pilot study shows the promise of acupuncture as a treatment for CIPN, where very few treatment options exist. Larger studies with longer follow-up and appropriate controls are needed to confirm the potential benefit of acupuncture as a standard treatment for CIPN."

Dr Ligibel agreed that an appropriate control condition is a challenge for this research.

"It's very complicated to figure out what is the best comparator because we just don't understand the mechanisms through which acupuncture works well enough to say what is a sham," she said.

Dr Lu, Dr Ligibel, and Dr Mao have disclosed no relevant financial relationships.

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