Acupuncture Techniques Reduce Chronic Pain Among Cancer Survivors

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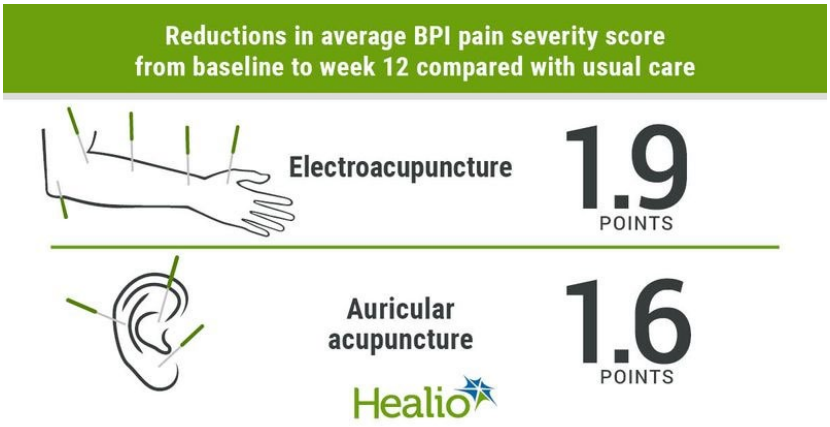
Electroacupuncture and auricular acupuncture led to greater pain reductions than usual care among cancer survivors with chronic musculoskeletal pain, according to results of a randomized clinical trial published in JAMA Oncology.

However, auricular acupuncture — a technique in which needle insertion is limited to the ears — did not demonstrate noninferiority to electroacupuncture, a technique that stimulates inserted needs with electricity to enhance endogenous opioid release, and more patients treated with the former technique experienced adverse events leading to discontinuation.



Electroacupuncture and auricular acupuncture led to greater pain reductions than usual care among cancer survivors with chronic musculoskeletal pain. Data were derived from Mao JJ, et al. *JAMA Oncol*. 2021;doi:10.1001/jamaoncol.2021.0310.

"Chronic pain is a common and challenging condition," Jun J. Mao, MD, MSCE, integrative medicine specialist at Memorial Sloan Kettering Cancer Center, and colleagues wrote. "In this randomized clinical trial of diverse cancer survivors with chronic musculoskeletal pain, electroacupuncture and auricular acupuncture improved pain severity, pain-related functional interference and quality of life, and reduced analgesic use compared with usual care. While both acupuncture techniques were

effective, auricular acupuncture had higher treatment discontinuation rates than electroacupuncture and did not meet criteria for noninferiority to electroacupuncture."

Because the opioid crisis made managing chronic cancer pain even more challenging, and given the benefit of acupuncture observed in other studies for noncancer pain, Mao and colleagues sought to investigate the use of electroacupuncture and auricular acupuncture as nonpharmacological treatment options for 360 cancer survivors without current evidence of disease who had musculoskeletal pain for at least 3 months.

Researchers randomly assigned the survivors 2:2:1 to 10 weekly sessions of electroacupuncture (n = 145; mean age, 61.9 years; 70.3% women; 71% white) or auricular acupuncture (n = 143; mean age, 62.6 years; 65.7% women; 76.2% white), or to usual care (n = 72; mean age, 61.4 years; 76.4% women; 83.3% white). The usual care group, who received analgesic medications, physical therapy or glucocorticoid injections as prescribed by their clinicians, could receive 10 acupuncture sessions from weeks 12 through 24.

Patients self-reported pain intensity using the Brief Pain Inventory (BPI), with scores ranging from 0 (no pain) to 10 (worse pain imaginable).

Change in BPI score from baseline to week 12 served as the study's primary endpoint. Researchers compared both acupuncture techniques with usual care using a gatekeeping multiple-comparison procedure and a linear mixed model.

Compared with usual care, average BPI pain severity score declined by 1.9 points (97.5% CI, 1.4-2.4) with electroacupuncture and 1.6 points (97.5% CI, 1-2.1) with auricular acupuncture from baseline to week 12, with pain reductions persisting until week 24.

Auricular acupuncture did not demonstrate noninferiority to electroacupuncture, as demonstrated by a 0.36-point greater BPI pain severity score reduction with electroacupuncture, and a one-sided 95% CI bound of 0.664 that exceeded the 0.657 noninferiority margin.

Researchers also noted that survivors who received acupuncture had greater improvements in pain-related functional interference and physical and mental quality

of life than the usual care group. Also, the acupuncture recipients' use of analgesics showed greater decreases at week 12, persisting at week 24, than the usual care group.

The most common adverse events included bruising (10.3%) in the electroacupuncture group and ear pain (18.9%) in the auricular acupuncture group. More patients in the latter group discontinued treatment due to adverse events (10.5% vs. 0.7%; $P < .001$).

The study may be limited by the lack of a sham control, which may have introduced bias as patients and clinicians weren't blinded to the type of treatment. Also, because it was conducted in an academic cancer center, the results may not be generalizable to the community setting.