Electroacupuncture helps ease carpal tunnel in study

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Preliminary research raises the possibility that an electrical form of acupuncture could become a useful treatment for the common wrist overuse condition known as carpal tunnel syndrome.

In the study, electroacupuncture helped carpal tunnel patients with long-lasting mild and moderate symptoms when it was used with splints overnight.

"For these patients, electroacupuncture produces benefits in symptoms, disability, function and dexterity," said study author Vincent Chung. He is a registered Chinese medicine practitioner and assistant professor with The Chinese University of Hong Kong.

Carpal tunnel syndrome develops when a nerve becomes pinched in the wrist, and it causes such symptoms as pain, numbness and tingling. Typing and diseases like arthritis can bring on the condition.

It affects an estimated 3 percent of U.S. workers ages 18 to 64, according to the U.S. Centers for Disease Control and Prevention.

"This is a chronic condition, frequently made worse by continuing job-related injury," said Dr. John Longhurst, a professor of medicine with the University of California at Irvine.

Splinting, in which a brace is used to prevent patients from flexing their wrists, is one treatment. But there are questions about its effectiveness. Injections with cortisone are also given. But the benefits are often only temporary, said Longhurst, who studies acupuncture.

"Surgery is the final option used after conservative medical treatment is insufficient," he said, but the condition can recur.

The new study looked at electroacupuncture, which "consists of using a small battery-driven device to stimulate acupuncture needles using either high or low frequency stimulation and typically low voltage," Longhurst explained. "It is typically administered for about 30 minutes repetitively once or twice a week over a period of several weeks. It causes similar effects as manual acupuncture."

Ladan Eshkevari, an associate professor at Georgetown University's School of Nursing and Health Studies, put the cost of electroacupuncture treatments at $75 to $120 an hour, with initial treatments often costing more.

"Side effects are usually minimal," Eshkevari said, "maybe bruising, often a very small bruise, maybe dizziness. But patients are usually lying down, so this is minimized."

As for pain, "the needles are very thin-gauged and, depending on the site of insertion, people usually don't feel pain. If they do, it is minimal," she said.

In the new study, researchers assigned 181 participants, all with mild to moderate carpal tunnel syndrome, to nighttime splinting alone or nighttime splinting plus 13 sessions of electroacupuncture over 17 weeks. A total of 174 participants finished the study.

Those who underwent electroacupuncture treatment reported less disability and less severe symptoms, plus more function and more dexterity, the researchers said. These goals are measured on various scales, making it difficult to pinpoint exactly how much the lives of the patients improved.

When asked to elaborate on the day-to-day effect, study author Chung said the benefits are highest in terms of reducing disability and improving dexterity. "Electroacupuncture also produces benefits in symptoms and strength for these patients," he said.

The electroacupuncture treatment didn't appear to have a significant effect on pain, the researchers added.

Both Longhurst and Eshkevari said the new study was limited, in part because the researchers didn't test it against a "sham" form of acupuncture to act as a control.

"This is a low-risk procedure that they might try since acupuncture helps to reduce pain and inflammation," Longhurst said.

Eshkevari agreed, saying "this is a scenario where it is worth a shot to avoid more invasive procedures like surgery. And this study is certainly promising."

Study author Chung cautioned that electroacupuncture isn't recommended for pregnant women or people with seizures, epilepsy, bleeding disorders, heart rhythm problems or pacemakers.

The findings were published in June in the Canadian Medical Association Journal.