

Acupuncture Improves Function in Heart Failure Patients

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Nov. 14, 2001 -- It wasn't so long ago that acupuncture -- the ancient practice of strategically piercing the skin with thin needles -- was considered far too "alternative" for Western medicine. But yet another clinical trial has shown that acupuncture really can bring good health effects. UCLA researchers found the treatment significantly lowers stress and improves heart function in the very sickest heart failure patients.

The team looked at people who had severe heart failure, a condition where the heart has become so weak from a previous heart attack, high blood pressure, or even an unknown cause that the organ can no longer pump enough blood through the body to keep the person healthy.

The researchers divided 14 critically ill heart failure patients -- who were all waiting for heart transplants -- into three groups. First, all the patients were tested to determine how their heart responds to stress. They performed anxiety-provoking tasks for four minutes, such as solving mathematical equations in their head, and afterward, the researchers measured blood pressure, heart rate, and sympathetic nerve activity.

The sympathetic nervous system is a group of nerves that regulates critical muscle movements in the body, the ones you don't even have to think about doing, such as maintaining your heartbeat. In an emergency, when you might be afraid or anxious, this handy system automatically kicks into gear and gets your heart to deliver more blood to the parts of the body needed to fight or escape a threat.

But when people have heart failure, this panic-alarm system is always turned on, forcing the already weak heart to work even harder. As a result, people become more vulnerable to dangerous heart rhythms.

"Advanced heart failure patients often have two or three times more sympathetic nerve activity than normal individuals," says study leader Holly R. Middlekauff, MD, associate professor of medicine at UCLA School of Medicine, in a news release. "It has been shown that the greater this activity is, the worse the outlook for the patient, so reducing it could be crucial."

As expected, the stress test increased sympathetic nerve activity by about 25% in all patients.

Next, patients in the first group received authentic acupuncture with needles placed in established "acupoints." The second group received acupuncture with randomly-placed needles, and the third were told they'd be receiving acupuncture, but in fact received a sham procedure where needles were tapped against, but not inserted into, the back of the neck. Then, everyone took another stress test.

"Blood pressure and heart rate were unaffected by the acupuncture, and both increased after mental stress testing in all groups," says Middlekauff. "But sympathetic nerve activation was significantly reduced in the [authentic] acupuncture group."

It's too early to recommend acupuncture as a routine treatment, says Middlekauff, and follow-up studies are needed to confirm the findings. But "until now, no one had looked at acupuncture's effect on the very sickest heart failure patients. Our research represents a promising first step," she says.

The team presents its findings today at the American Heart Association's annual conference being held in Anaheim, Calif.

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