

"One piece of the puzzle"

UCH, SOM Test Acupuncture To Relieve Parkinson's Patients' Mysterious Fatigue

Nearly everyone knows the weariness or even exhaustion that sometimes accompanies the end of a long day of physical or mental exertion. For most of us, however, the fatigue passes with a good night's sleep or a Sunday spent sprawled on the couch.

It does not work that way for patients with Parkinson's disease, a progressive disease of the nervous system that causes tremors, muscle rigidity and other movement problems. And roughly half of all Parkinson's patients, adds Benzi Kluger, MD, MS, assistant professor of Neurology at the University of Colorado School of Medicine, are also plagued by chronic fatigue.



Kluger hopes to crack the mysteries of fatigue.

As the principal investigator of a three-year, \$480,000 grant from the Michael J. Fox Foundation for Parkinson's Research, Kluger aims to discover if the ancient technique of acupuncture can help relieve these patients' fatigue. He's collaborating with Lisa Corbin, MD, medical director for The Center for Integrative Medicine (TCFIM) at University of Colorado Hospital. Her center regularly uses acupuncture to treat patients with a wide variety of symptoms and ailments.

Sticking point. Kluger and Corbin hope to enroll 100 study patients, with the first possibly coming on board this month. Half will receive twice-weekly acupuncture treatments for six weeks at TCFIM, while the other half will receive "sham" treatments using a technique Kluger declines to identify in order to maintain the integrity of the study. The investigators will measure the results using the "Modified Fatigue Impact Scale,"

a questionnaire originally developed for patients with multiple sclerosis.

The scale will help to compare how much fatigue affected patients' lives before treatment to how much their fatigue changed afterward. "Secondarily, we're looking for changes in quality of life and other movement symptoms," Kluger adds.



Acupuncture shows some promise as a treatment for fatigue, Corbin says.

Fatigue is far from a trivial issue for them, Kluger explains.

"It ranks as one of the three most disabling symptoms patients report," he says. "It interferes with what they have to do every day. It also interferes with their ability to exercise, which is important to helping them maintain balance and function. It's hard to do that on a regular basis if you're fatigued."

Open for business. The field for research into the problem is inviting, Kluger adds, because to date there are no reliable treatments for Parkinson's-related fatigue.

Providers sometimes prescribe stimulants like methylphenidate (trade name Ritalin), he says, but with variable success. "They're not a home run. Most of the time they don't do a lot."

Acupuncture already is a common treatment for fatigue in non-Parkinson's patients, especially those with cancer and chronic fatigue syndrome. Some studies also have looked at how the technique helps patients whose Parkinson's is idiopathic, or has no specific known cause, Corbin says.

But a systematic review of their safety and efficacy that appeared in the November 6, 2008 issue of *The Journal of Complementary and Alternative Medicine* concluded most of the studies were flawed. And none has yet studied using acupuncture to treat Parkinson's-related fatigue, she adds.

That research void may have attracted the Michael J. Fox Foundation to the study, Kluger notes. "They were looking for a well-designed alternative medicine study," he says.

Corbin says TCFIM acupuncturists Mary Christian, LAc, Ban Wong, LAc, and Daisy Dong-Cedar, LAc, OMD, researched the literature to determine the specific stimulation points as indicated by traditional Chinese medicine.

Cracking a mystery. For his part, Kluger says that while he expects patients enrolled in the study to improve, the outcomes will likely lead to other questions. "[The improvement] will either be a real effect from acupuncture or a placebo effect," he remarks. "We'll either understand acupuncture or placebos better."

He notes that brain imaging shows that placebos often produce an increase of dopamine, a neurotransmitter associated with smooth, controlled movements. The brain, he adds, may have an "innate capacity to turn up dopamine levels. The question is, if a patient's hope and expectations are predictive of a placebo effect, can we learn how to augment that?"

He acknowledges that fatigue remains a mysterious and poorly understood phenomenon, generally, but especially so in Parkinson's patients.

"We know that they get fatigued," Kluger says, "and that it can be associated with depression. But not all patients with fatigue have depression. Even among those with depression, some get better with antidepressants and others don't. It doesn't correlate with severity of the disease, lack of sleep or medications. It's its own entity."

Past experience gives Corbin hope that acupuncture could help Parkinson's patients fight fatigue, but she too sounds a cautionary note.

"We've used it [at TCFIM] to treat fatigue, and anecdotally it's been effective," she says. "But we don't recommend it as a stand-alone treatment. The best approach includes graded [gradually increasing] exercise, mind-body exercises and deep sleep."

"I suspect there are lots of different factors involved in fatigue: sleep, diet, exercise, and emotional factors," Kluger agrees. "It's a complex phenomenon. We'll be looking at one piece of the puzzle."