SMOKED CANNABIS REDUCES PAIN CAUSED BY HIV-ASSOCIATED NEUROPATHY

In a randomized placebo-controlled trial, patients smoking cannabis experienced a 34 percent reduction in intense foot pain associated with HIV—twice the rate experienced by patients who smoked placebo.

“This placebo-controlled clinical trial showed that people with HIV who smoked cannabis had substantially greater pain reduction than those who did not smoke the cannabis,” said study lead author Donald I. Abrams, MD, UCSF professor of clinical medicine. “These results provide evidence that there is a measurable medical benefit to smoking cannabis for these patients.”

The study, published in the February 13 issue of the journal “Neurology,” looked at 50 HIV patients with HIV-associated sensory neuropathy, a painful and often debilitating condition that is the most common peripheral nerve disorder that occurs as a complication of HIV infection. Occurring usually in the feet and characterized at times by tingling, numbness, the sensation of pins and needles, burning, and sharp intense pain, severe peripheral neuropathy can make walking or standing difficult.

Patients participating in the study were randomized into two equal groups—one assigned to smoke cannabis and the other assigned to smoke identical placebo cigarettes with the cannabinoids extracted. The patients smoked the study cigarettes three times a day for five days under supervision as inpatients in the General Clinical Research Center at San Francisco General Hospital Medical Center.

“Even though antiretroviral treatments have reduced the prevalence and severity of many HIV-related neurological complications, neuropathy continues to affect up to one of every three patients,” said co-author Cheryl A. Jay, MD, UCSF professor of clinical neurology. “There are no FDA-approved treatments for HIV-related neuropathy. This study suggests new avenues to manage neuropathic pain in this setting.”

The study also incorporated a pain model developed at UCSF that provided a standardized reference point. This model allowed researchers to compare relief of chronic HIV-associated neuropathic pain simultaneously with patient response to pain and skin sensitivity induced by heating and capsaicin application.
"The beauty of this study is the use of the pain model as a neutral and physiological anchor for pain measurement. Patients' eyes were averted during the measurements and were uninfluenced by expectations. Smoked cannabis was shown to work on the pain system by shrinking the area of painfully sensitive skin created by the model. The response was comparable to strong pain relievers we have studied, such as morphine," said co-author Karin L. Petersen, MD, UCSF assistant adjunct professor of neurology.

This study is the first to be completed of several clinical trials of medicinal cannabis being conducted under the auspices of the University of California’s Center for Medicinal Cannabis Research.

“It has been many years since clinical trials with cannabis have been conducted in the United States,” said Igor Grant, MD, professor of psychiatry at the UC San Diego School of Medicine and director of the CMCR. “As a result there has been insufficient light shed on the possible therapeutic value of cannabis. The results of this first study indicate that cannabis may indeed be useful in the amelioration of a very distressing, disabling, and difficult to treat complication of HIV. We look forward to the results of several additional CMCR studies nearing completion to continue clarifying cannabis’ possible role as a therapeutic agent.”

Co-authors include Starley B. Shade, MPH; Hector Vizoso, RN; and Mary Ellen Kelly, MPH, from the UCSF Positive Health Program at San Francisco General Hospital Medical Center, and Michael C. Rowbotham, MD; Haatem Reda, BA; and Scott Press, BS, from the UCSF Pain Clinical Research Center.

The General Clinical Research Center at SFGH is funded by NIH.

The UCSF Positive Health Program is a program of the AIDS Research Institute at UCSF. UCSF ARI coordinates all of the HIV/AIDS research, treatment, and prevention activities at UCSF. Combining the best basic science, bench-to-bedside research, behavioral studies, direct care services, and policy development, the ARI at UCSF is one of the premier HIV/AIDS medical, education, and research institutions in the world.

UCSF is a leading university that advances health worldwide by conducting advanced biomedical research, educating graduate students in the life sciences and health professions, and providing complex patient care.

###