

THE EFFECTS OF SMOKED CANNABIS IN PAINFUL PERIPHERAL NEUROPATHY AND CANCER PAIN REFRACTORY TO OPIOIDS

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INTRODUCTION: There is significant evidence that cannabinoids may be involved in the modulation of pain, especially of neuropathic origin. There is also theoretical rationale to suggest that cannabinoids may provide synergistic analgesia with opioids while possibly reducing opioid-related side effects. No information is available on potential pharmacokinetic interactions between cannabinoids and opioids.

METHODS: We are currently conducting two clinical trials of smoked marijuana in two populations of patients with pain: HIV patients with painful peripheral neuropathy and cancer patients with persistent pain despite an opioid analgesic. Both studies are designed to begin with a 16 patient open-label pilot proof-of-concept phase. If effectiveness is demonstrated in the pilot, the magnitude of the effect allows us to calculate a follow-on randomized, double-blind controlled trial of smoked marijuana vs smoked placebo. In addition to the effect of smoked marijuana on the subjects' chronic clinical pain, we are also evaluating the impact on an experimental heat/capsaicin pain model. Here we report experience with the open label phase of the neuropathy study.

RESULTS: Sixteen subjects (14 men, 2 women, mean age 43 years) completed the HIV neuropathy pilot trial. Patients had an average of 6 years of neuropathic pain. In 3 cases the pain was felt to be secondary to HIV alone, in 8 secondary to dideoxynucleoside antiretrovirals and to both in 5. Excellent correlation was seen between the response to smoking in the effect on both the chronic neuropathic and the acute experimental pain model over a six-hour period. Overall 10 of the 16 participants experienced a greater than 30% reduction in their neuropathic pain after seven days. This allowed us to proceed with our currently enrolling randomized placebo-controlled trial with a target sample size of 50 subjects. Additional controlled trials of smoked marijuana for HIV peripheral neuropathy are being conducted by other University of California Center for Medicinal Cannabis Research investigators.

CONCLUSION: Preliminary results from a small, uncontrolled trial of smoked marijuana in HIV peripheral neuropathy are encouraging. The ongoing randomized trials will better elucidate the role of cannabinoids in this condition. A heat/capsaicin experimental pain model appears to be a good predictor of response to chronic pain. The potential of a beneficial clinical interaction between cannabinoids and opioids requires further study.

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