

Commentary

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COMMENTARY

Marijuana for pain

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The proponents of using crude marijuana for medical applications have supported using marijuana for numerous questionable indications. Despite sparse medical data, spasticity, pain, migraine headaches, and menstrual cramps have recently been added to the alleged medical benefits espoused for chemotherapy-related nausea, appetite stimulation, and glaucoma.

Two new studies have shed light on the pivotal issue of dose specificity and the therapeutic window of cannabinoids. Wallace et al (1) demonstrated that higher doses of smoked marijuana actually increased pain in research subjects. It is significant that the higher doses of cannabinoids have typically been associated with more dysphoria and side effects.

Bambico et al. (2) have identified that anti-depressant effects from cannabinoids are mediated through the medial prefrontal cortex. While lower doses exhibited antidepressant qualities, they also found that higher doses were associated with suppression of serotonin and thus a loss of anti-depressant effects.

The implications of these findings are profound and important. First, it appears that cannabinoids in general, and certainly crude marijuana, have a narrow therapeutic window as it relates to pain and depression. Consistent with our prior recommendations (3,4,5), this would certainly support the development of dose-controlled, specific cannabinoids designed to enhance target effects rather than the shotgun effect of smoking marijuana. More importantly, such findings strongly suggest that crude marijuana is not appropriate for pain or antidepressant applications. Considering that THC concentrations vary from approximately 2% to 30%, such narrow therapeutic windows are difficult to target. Furthermore, the toxic milieu of 488 substances which include 66 cannabinoids makes therapeutic dose targets a free-for-all.

It appears that the opinion of Tramer et al. still is applicable (6):

"These results should make us think hard about the ethics of clinical trials of cannabinoids when safe and effective alternatives are known to exist and when efficacy of cannabinoids is known to be marginal."

References

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