Journal Watch

Smoked cannabis for chronic neuropathic pain: a randomized controlled trial

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Abstract:

Background: Chronic neuropathic pain affects 1%-2% of the adult population and is often refractory to standard pharmacologic treatment. Patients with chronic pain have reported using smoked cannabis to relieve pain, improve sleep and improve mood.
Methods: Adults with post-traumatic or postsurgical neuropathic pain were randomly assigned to receive cannabis at four potencies (0%, 2.5%, 6% and 9.4% tetrahydrocannabinol) over four 14-day periods in a crossover trial. Participants inhaled a single 25-mg dose through a pipe three times daily for the first five days in each cycle, followed by a nine-day washout period. Daily average pain intensity was measured using an 11-point numeric rating scale. We recorded effects on mood, sleep and quality of life, as well as adverse events.
Results: We recruited 23 participants (mean age 45.4 [standard deviation 12.3] years, 12 women [52%]), of whom 21 completed the trial. The average daily pain intensity, measured on the 11-point numeric rating scale, was lower on the prespecified primary contrast of 9.4% v. 0% tetrahydrocannabinol (5.4 v. 6.1, respectively; difference = 0.7, 95% confidence interval [CI] 0.02-1.4). Preparations with intermediate potency yielded intermediate but nonsignificant degrees of relief. Participants receiving 9.4% tetrahydrocannabinol reported improved ability to fall asleep (easier, $p = 0.001$; faster, $p < 0.001$; more drowsy, $p = 0.003$) and improved quality of sleep (less wakefulness, $p = 0.01$) relative to 0% tetrahydrocannabinol. We found no differences in mood or quality of life. The most common drug-related adverse events during the period when participants received 9.4% tetrahydrocannabinol were headache, dry eyes, burning sensation in areas of neuropathic pain, dizziness, numbness and cough.
Conclusions: A single inhalation of 25 mg of 9.4% tetrahydrocannabinol herbal cannabis three times daily for five days reduced the intensity of pain, improved sleep and was well tolerated. Further long-term safety and efficacy studies are indicated. (International Standard Randomised Controlled Trial Register no. ISRCTN68314063)

Comments:

Strength/Uniqueness:

The study provides evidence for a role for smoked cannabis (9.4% THC) in the management of neuropathic pain with a specific mechanism (allodynia or hyperalgesia secondary to post-traumatic or post-surgically induced neuropathic pain).

Weakness:

The pain mechanism in the target population was highly specific, therefore, the generalizability of the results to neuropathic pain is significantly limited.

The use of average daily pain intensity as a primary outcome is questionable. Also,the pain score reduction appears minimal and of uncertain clinical significance.

By the end of the study, 76% of the patients were able to identify cannabis (9.4% THC) .Placebo was identified by 62% of participants as well and this leads to some concern regarding the adequacy of double blinding.

Relevance to Palliative Care:

Treatment options for neuropathic pain are very limited, especially for central neuropathic cancer pain. A fraction of cancer patients who require analgesic management are resistant to conventional therapy, and require significantly higher doses of opioid therapy with limited efficacy. This study may suggest an alternative management option with a different targeted outcome, such as potential improvement of psychomotor symptoms despite minimal analgesic effects.