Low Dose Cannabis Oil Extract As A Treatment For Intractable Trigeminal Neuropathic Pain

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ABSTRACT: The objective was to investigate whether using low dose cannabis oil in a patient with severe intractable chronic neuropathic pain will: 1. Improve the level of pain, 2. Improve quality of life 3. Reduce the amount of conventional pharmaceutical medications.

Methods: Low dose (micro dose) cannabis oil extract containing: THCA 0.54mg, THC 0.43mg, CBDA 0.055mg, CBD 0.072mg, CBNA 0.012mg, CBN 0.018mg, and CBG 0.044mg per 1 ml-administered 1ml sublingually every 6-8 hours to a patient with 23 years of intractable trigeminal neuropathic pain after endoscopic sinus surgery. Prior to this treatment, the patient was maintained on: oxycodone/acetaminophen 10/325mg 2 tablets every 4 hours, verapamil 5mg once a day, gabapentin 1200mg every 4 hours, escitalopram 25 mg once a day and had a daily average pain scale ranging from 8-9/10.

Summary: Upon follow up one month after beginning micro dose cannabis oil treatment, the patient reported an average daily pain scale of 3/10. He reports that his ability to function, ADL's, quality of life and work has improved dramatically.

In one month the patient reduced oxycodone/acetaminophen 10/325mg to one tablet every 6 hours and reduced the gabapentin to 800mg every 8 hours.

Conclusions: Cannabinoids have been shown to be a successful alternative for the treatment of neuropathic pain. In addition, cannabis has been used synergistically with opioids to enhance pain relief, or reduce or replace opioids. In this case the patient had poorly controlled pain on a steady state medication regimen with a pain scale of 8-9/10. With the addition of micro dose cannabis oil he was able to reduce his pain scale score to 3/10 and reduce the amount and dosage of oxycodone/acetaminophen and gabapentin.

BACKGROUND: Cannabis has been investigated as an adjunct or sole modality to treat neuropathic pain. The majority of the studies focused on inhalational administration and concentrations of THC-the most studied psychoactive ingredient in cannabis-ranging from 1-8%. (1) 26 clinical trials of good or excellent quality have been reported, and half are in patients with neuropathic pain. 20 of the 26 trials used synthetic cannabinoids such as nabilone or nambiximols and 6 trials were conducted using inhaled cannabis flower. 1364 patients completed these 26 trials and results showed cannabinoids were effective in alleviating pain; especially neuropathic pain. (2) Two of these studies showed the effectiveness using 3.56% THC (3) and vaporized cannabis (4) THC 3.53% and 1.29% and all have found to be useful in the treatment for neuropathic pain. However, the other cannabinoids that work synergistically in the pain relieving properties of cannabis have not been described in these studies. GW Pharma created Sativex® THC:CBD 1:1 as a sublingual administration. Each I microliter spray contains 2.7mg THC and 2.5mg CBD. It was found that Sativex® has a positive broad spectrum therapeutic effect for neuropathic pain, when used in addition to existing analgesic medication. (5)

We hypothesized that a whole plant extract with cannabinoid concentrations in micro doses would relieve neuropathic pain. Micro dose concentration of cannabinoids was also hypothesized to improve the quality of life by essentially eliminating the psychoactive effects of high dose THC. We investigated a micro dose sublingual preparation of cannabis oil extract with a total cannabinoid concentration of 1.171 mg/ml. We hypothesized that a micro dose of the whole plant extract of cannabinoids would have pain relieving properties similar to the higher concentrations of THC:CBD preparations.

Case Presentation: This case study is of a 36-year-old white male who has been diagnosed with intractable trigeminal neuropathic pain after endoscopic sinus surgery and septoplasty at the age of 13. Immediately after surgery, the patient complained of a constant dull, boring, burning and pressure headache at the frontal lobe region with sporadic sharp stabbing pain. Over a 23-year period the patient has seen multiple physician specialists: neurologists, neurosurgeons, pain medicine specialists, otolaryngologists, and has undergone a multitude of treatments including: steroid injections of his face, and cervical spine, botulinum toxin injections, acupuncture, massage therapy, tens, and a multitude of medication trials. Three years prior to cannabis treatment he was trialed on multiple opioid medications for which he required escalating doses and was ultimately but poorly maintained on the following drug regimen: oxycodone/acetaminophen 10/325mg 2 tablets every 4 hours, verapamil 5mg once a day, gabapentin 1200mg every 4 hours, escitalopram 25 mg once a day and had a daily average pain scale ranging from 8-9/10.

He began a micro dose cannabis oil extract containing: THCA 0.54mg, THC 0.43mg, CBDA 0.055mg, CBD 0.072mg, CBNA 0.012mg, CBN 0.018mg, and CBG 0.044mg per 1 ml for a total cannabinoid content of 1.171 mg. The dose started at 1 ml sublingually every eight hours. After one month of cannabis oil extract treatment the patient's medications were reduced to: oxycodone/acetaminophen 10/325mg 1 tablet every 6 hours, gabapentin 800mg every eight hours. The other medications remained unchanged.

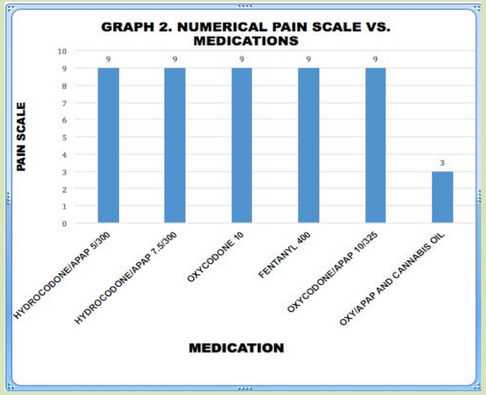
TABLE 1. SUMMARY OF MEDICATIONS

TIME/MONTHS	DRUG	DOSE/DAY	MORPHINE EQUIVALENT
0-2	Hydrocodone 5mg	20mg	20
2-4	Hydrocodone 5mg	30mg	30
4-6	Hydrocodone 5mg	40mg	40
6-8	Hydrocodone 5mg	60mg	60
8-10	Hydrocodone 7.5mg	60mg	60
10-12	Hydrocodone 7.5mg	90mg	90
12-13	Oxycodone SR 10mg	20mg	30
13-15	Oxycodone SR 10mg	40mg	60
15-18	Oxycodone SR 10mg	60mg	90
18-19	Fentanyl 400mcg	4800mcg	96
19-24	Oxycodone 10mg *	120mg	180
24-25	Oxycodone 10mg + Micro-dose Cannabis Oil *	80mg/3ml	120
25-30	Oxycodone 10mg + Micro-dose Cannabis Oil **	40mg/6ml	60
30-36	Oxycodone 10mg + Micro-dose Cannabis Oil **	20mg/6ml	30

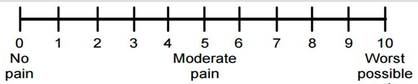
*= gabapentin 1200mg q4hours, **= gabapentin 800mg q8hours

GRAPH 1.
Reduction Of Opiates With Introduction Of Cannabanioids Over Time

GRAPH 2. NUMERICAL PAIN SCALE VS. MEDICATIONS



0–10 Numeric Pain Rating Scale



THE PATIENT WAS TRIALED ON FIVE DIFFERENT OPIOID MEDICATIONS AND CONTINUED TO HAVE A PAIN SCALE SCORE OF 9/10. CANNABIS OIL ADDED TO LAST PAIN MEDICATION AND REDUCED PAIN SCALE SCORE TO 3/10

Summary of findings: The patient reported a significant improvement in pain relief with the addition of the micro dose of the cannabis oil extract. Average daily pain scale score dropped from 8-9/10 to 3/10. The patient reported improvement in the ability to function, ADL's, quality of life, and ability to work.

Discussion: Cannabinoids have been shown to be a successful alternative and/or adjunct for the treatment of neuropathic pain. In addition, cannabis has been used synergistically to enhance the pain relief from the opioids, or reduce or replace opioids. In this case the patient was on a steady state medication regimen and was poorly controlled with a pain scale of 8-9/10. With the addition of micro dose cannabis oil the patient was able to reduce the pain scale score to 3/10 and reduce the amount and dosage of oxycodone/acetaminophen and gabapentin.

Trigeminal neuropathic pain is a debilitating chronic pain condition that is generally refractory to conventional medical treatment. This case is an example where cannabis medicine was used to reduce neuropathic pain symptoms, improve patient quality of life, and reduce the risk of escalating opioid medicines.

At the time of this abstract submission, the patient is continuing to decrease the daily dose of oxycodone/acetaminophen and gabapentin with the goal of achieving adequate pain management and acceptable quality of life with cannabis oil treatment only.

References

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