

Full spectrum medical cannabis (Vijaya) oil as a veterinary treatment for osteoarthritis, hip dysplasia and musculoskeletal disorders: A case series

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Abstract

In veterinary medicine, Osteoarthritis, Hip Dysplasia and pain disorders are commonly diagnosed conditions, and it presents significant difficulties for the well-being of canines. The aim of this case series is to report the use of full spectrum medical cannabis (vijaya) for treating symptoms such as pain, inflammation, impaired mobility. Four Labrador breed patients between 6 years to 8 years, suffering from acute mobility issues were diagnosed with OA and HD. All patients were administered 4 drops of the full spectrum oil, orally, twice daily. After one month of the treatment, there was significant change in the pain markers with improved mobility. The recommended dose is 0.16 mg/kg/body wt for management of OA and HD related pain and inflammation. A boost in appetite and quality of life was also observed. In the future it is important to incorporate new treatment options in the medical practice and further research needs to be conducted on its use for other illnesses and animal species.

Keywords: Osteoarthritis; Hip Dysplasia; Medical Cannabis; Cannabinoids; Pain

1. Introduction

Osteoarthritis (OA) is a disease that causes pain in the synovial joints and its surrounding tissues, but it is most frequently linked to the degeneration and functioning of articular cartilage (1). Joint mobility and OA in one or both of the coxofemoral (hip) joints are hallmarks of the complicated developmental condition known as hip dysplasia (HD) (2). Painkillers such as anaesthetics/ opioids / NSAIDs are short-term solutions for reducing pain. In cases of debilitating diseases like OA, HD, musculoskeletal disorders, and distress from radiotherapy/chemotherapy for cancer pain, it has been difficult to continue these medications for long periods of time. This is mainly because these painkillers have long-term detrimental effects on vital organ systems of the body, and more often than not, instead of improving the quality of life of the animal, they end up creating more complications.

One of the main causes for initiation of diseases such as OA and HD is inflammation. The endocannabinoid system (ECS), present in nearly all mammals, is activated by secretions from the postsynaptic neurons called eCBs (endocannabinoids) like arachidonoyl ethanolamide, that activate the CB1 and CB2 receptors present in the ECS thereby having immunomodulatory effects since CB2 receptors are present in immune cells (3), in addition helping in pain relief and inhibition of human neoplastic cell proliferation (4). The two parts CBD and THC are required for reduction in the angiogenic factors that are responsible for cancer cell proliferation. This action is dose dependent (5). It has also been shown that medical cannabis, consisting of THC and CBD, has antioxidant and neuroprotective action by counteracting the action of reactive oxygen species (ROS), thereby protecting nerve supply to vital organs (6). It was observed by Mc Allistar et al., that both CBD and THC are equally important and have an entourage effect ie they are greater than a sum of its parts (4). After studying the scientific literature available, a clinical decision was taken to initiate the use of Medical cannabis in patients suffering from a range of inflammatory conditions causing pain and making normal mobility

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impossible. In this case series we describe the use of full spectrum medical cannabis (vijaya) oil consisting of both CBD and THC in balanced ratio and micro-dosing of medical cannabis has been practiced for therapeutic results.

2. Case 1-4

Four Labrador breed dogs (patients) between 6 years to 8 years, suffering from acute mobility issues were brought for consultation. All 4 patients experienced symptoms including impaired mobility, inflammation, severe pain and trouble urinating on their own. Due to severe pain, the patients were found whining whenever they changed their position on a well cushioned bed. Physical examination confirmed that the patients were unable to place weight on one of their hind legs. Diagnosis for Osteoarthritis (OA) and Hip Dysplasia (HD) was done through standard X-Ray examination on dorsoventral orientation. It was seen that OA in all cases had reached a very advanced stage. The joint margins were flossy and not clearly demarcated. Nearly all major joints of both fore and hind limbs were severely affected.

There was left or right HD in all 4 dogs with a very high level of inflammation due to insufficient acetabular cover to femoral head. During analysis of X ray in all four cases, different degrees of periarticular osteophytosis, subchondral sclerosis, joint swelling and effusion, some joint remodeling, and to some extent joint space narrowing were seen, that pointed to advanced OA (osteoarthritis). All the patients were started on a non-steroidal anti-inflammatory drug (NSAID); Carbesia 100mg twice a day orally. After one month of the treatment, there was no significant change in the pain markers and mobility (slight improvement).

Blood tests were done and indicated stress to liver due to elevation of liver enzymes. Two patients suffered from gastrointestinal bleeding due to the NSAID and the other two showed GI symptoms. This protocol was combined with glucosamine, chondroitin with methylsulphonylmethane (MSM) that is a standard treatment plan in veterinary sciences. The pain and distress was of such a high level that it was decided to try full spectrum medical cannabis (Vijaya) oil which is approved under ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH). Various human and international veterinary / laboratory studies have shown good results in case of utilization for full spectrum medical cannabis oil for pain and inflammation.

Full spectrum medical cannabis (Vijaya) oil was obtained under veterinary prescription from Cannazo India (a registered company). The full spectrum oil was presented in a 10 ml dark glass bottle with a dropper. The 10 ml oil has the total potency of 1000 mg with a balanced ratio of CBD:THC::1:1. Since the weight of all the patients was around 30 kilograms (kg), they were given the same dose of the oil. All patients were administered 4 drops twice a day, orally, after food. The 4 drops were carefully mixed in any kind of edible oil. There were no palatability issues, thus a total of 8 drops (micro-dosing) was given in each case daily.

3. Results and Discussion

There was a significant change observed in the pain markers of all the patients and they were able to walk without pain, after one week of the treatment. One of the symptoms experienced in OA is painful defecation due to the squatting position to be adopted. No patient experienced painful defecation / urination after 7 days (one week) of the new therapy protocol. After 30 days of therapy the patients showed significant improvement in the mobility and were able to walk and maintain a standing posture for a few minutes.

In all cases, there was also a marked improvement in the appetite, quality of life and the patients became healthier. A second blood test was taken and it was seen that even after 30 days of using micro-dose of full spectrum vijaya oil, there was no elevation of liver enzymes. Therefore it can be indicated that this is a very effective long term treatment strategy to help with pain, reduce inflammation and generally improve the quality of life afflicted with advanced OA and HD.

- All patients were given 8 drops that translates to 0.25 ml.
- 0.25 ml has 25 mg of Full Spectrum phytocannabinoids.
- 8 drops has only 10% of CBD and THC
- This means each patient was given a total dose of 5 mg of cannabinoids.
- It can further be stated that if a 30 Kg Labrador dog was given 5 mg then the dose rate is exactly 0.16 mg/kg/body weight.

It can be seen that only a daily dose of 0.16 mg/kg/body weight for 30 days had a marked effect on all 4 dogs suffering from severe pain and chronic mobility issues. There were no psychotropic effects and only therapeutic results were observed. It can be stated that micro-dosing at the appropriate dose is the key.

4. Conclusion

This is the first case series to report the use of phytocannabinoids for veterinary purpose in India and it has shown encouraging results. The dogs on 0.16 mg/kg/body wt for 30 days showed marked relief from OA and HD pain and inflammation. This has to be used very carefully in dogs as they are more sensitive to effects of THC than humans, therefore careful micro-dosing was done. However it must be remembered that both CBD and THC have an entourage effect and using only CBD may not be as effective since presence of both components is necessary. The quality of life also improved. A clinical decision was taken to continue this long term keeping in view the clinical results, and periodic monitoring of blood parameters would be carried out. It is recommended that veterinary institutions/ colleges/ universities should carry out further research to investigate this therapeutic option for other animals, to improve their quality of life by mitigating their pain and suffering that is the duty of every veterinarian.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of Informed consent

All guardians were aware of the protocol.

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