



Research Article

A PRELIMINARY OBSERVATION STUDY TO EVALUATE SAFETY AND EFFICACY OF BOHECO EASE IN MYALGIA

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ABSTRACT

One of the most frequent concerns at emergency departments and clinics across the nation is muscle soreness and fatigue. Oftentimes, severe pain and fatigue subside on their own or seem to do so in response to several medications and therapeutic methods. Excitation-contraction coupling in the muscle, and actin-myosin filament interactions, decreased function can lead to failure of voluntary muscle contraction. The two most powerful Phyto-cannabinoids found in the *Cannabis sativa* plant are CBD (cannabidiol) and delta-9-tetrahydrocannabinol (THC). CBD was effectively delivered trans dermally for anti-inflammatory activity in various animals. *Cannabis sativa* or *Vijaya* has *Shulahara* property as per Ayurveda. Muscle pain and Swelling are caused by a rise in the *Ruksha* and *Sheeta* qualities of the *Vata dosha* and accumulation of *Kleda*. *Cannabis sativa*, also known as *Vijaya*, has *Ushna* properties that have the power to reduce *Vata dosha*. It has *Pachak* property which helps to mitigate *Kleda*. Oil tends to decrease *Rukshata* due to *Vata dosha*. As a result, reducing pain and inflammation which also lessens discomfort and irritation. **Methods:** A preliminary survey on 30 patients was conducted and data was collected. **Results:** More than 90% of patients had reduced symptoms of pain and inflammation in muscles, post-application twice a day with a lasting effect of more than 3 hours. It helps in reducing *Kleda* present in muscles. **Conclusions:** Ease oil was having a better result in patients having myalgia. It was safe on use for long term.

INTRODUCTION

One of the most frequent concerns at emergency departments and clinics across the nation is muscle soreness and fatigue. Oftentimes, severe pain and fatigue subside on their own or seem to do so in response to several medications and therapeutic methods. Muscle aches and fatigue can occasionally become chronic, giving rise to syndromes like chronic fatigue syndrome (CFS) and fibromyalgia syndrome (FMS). Both conditions are debilitating and are characterised by persistent, incapacitating fatigue that is exacerbated by even light exercise in the case of CFS and chronic widespread pain (CWP) with a focus on the muscles that can prevent most or all activities in

the case of FMS. Both conditions are frequently linked to one another as well as several other conditions, including numerous chemical sensitivities, Temporomandibular joint disorder, and irritable bowel syndrome. These syndromes take lives, do not react well to existing treatments, and can cause patients to face extreme financial distress due to high treatment costs. The molecular processes underlying muscular pain remain unclear, in contrast to cutaneous pain, which has been extensively researched and is well understood. Debilitating lethargy is a sign that is even more mysterious. Mosso observed that there appears to be a single word for fatigue in all countries in his comprehensive book on the topic written a century ago.<sup>[1]</sup> However, the term "fatigue" is used to describe a wide range of conditions, including the inability of muscle fibres to shorten normally, poor motor command signals, feelings of fatigue, heaviness, pressure, and weakness from the muscles, as well as a sense of mental fatigue that makes it difficult to focus and complete conceptual tasks.

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Most physiological studies on exhaustion have focused on spontaneous muscular contraction. At all stages of the neuromuscular system, including the motor brain, communication to motoneurons, motoneuron signals to the muscle, excitation-contraction coupling in the muscle, and actin-myosin filament interactions, decreased function can lead to failure of voluntary muscle contraction. One of the homeostatic inputs may "result from a discrepancy between subconscious representations of baseline physiological homeostatic state and the state of physiological activity induced by physical activity, which generates a second order representation and is sensed as weariness by consciousness-producing systems".[2]

Pain and inflammation can be reduced by targeting cannabinoids and cannabinoid receptors. About 80 distinct cannabinoids have been identified in Cannabis sativa, with THC and CBD being the two most prevalent. Chemically, these substances resemble natural endocannabinoid lipid products like 2-arachidonoylglycerol and anandamide (arachidonylethanolamide). Despite sharing molecular similarities with THC, CBD is a non-psychoactive cannabinoid that has therapeutic promise for the therapy of inflammation, neuropathic pain, cancer pain, and multiple sclerosis. [3,4,5] Because of first pass processing during absorption, the oral bioavailability of CBD is extremely low. Since CBD-like cannabinoids have a low propensity for binding to CB1 or CB2 receptors, it is unclear how they function in inhibition compared to THC-like cannabinoids, which operate at these receptors. According to data, CBD application in vitro suppresses signalling through GPR55 and TRP channel super family members, and oral delivery in vivo reduces the release of pro-inflammatory cytokines in a dose-dependent manner. More recently, CBD was effectively delivered transdermally for anti-inflammatory activity in various animals. [6,7,8]

According to Ayurveda, Myalgia is correlated with *Mansagata vata*. *Mansagata vata* signs include *Guruvanga* (heaviness of body), *Toda* (pricking pain) and *Dandamushtahatam* (as if beaten by a strong rod or fist cuff) and *Saruka shramita* (painful severe fatigue).[9] Muscle pain and Swelling are caused by a rise in the *Ruksha* and *Sheeta* qualities of the *Vata dosha* and accumulation of *Kleda*. *Cannabis sativa*, also known as *Vijaya*, has *Ushna* properties that have the power to reduce *Vata dosha*. It has *Pachak* property which helps to mitigate *Kleda*. Oil tends to decrease *Rukshata* due to *Vata dosha*. As a result, reducing pain and inflammation which also lessens discomfort and irritation.

**MATERIALS AND METHODS**

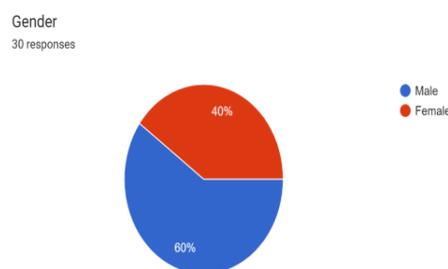
A preliminary survey of 30 patients was conducted and questionnaire was filled by the patient. Data was collected and analysed to obtain result. Composition of EASE oil: 1% Cannabis leaf extract, 91% Cannabis seed oil, 5% Peppermint Oil and 3% Camphor Oil. Within the 1% Cannabis leaf extract there was an estimated 4-6mg of CBD per ml.

Sr.no	Name of ingredient	Quantity
1	Cannabis leaf extract	1%
2	Cannabis seed oil	91%
3	Peppermint oil	5%
4	Camphor oil	3%

**RESULTS**

Out of 30 patients, 18 were male and 12 were female [figure 1].

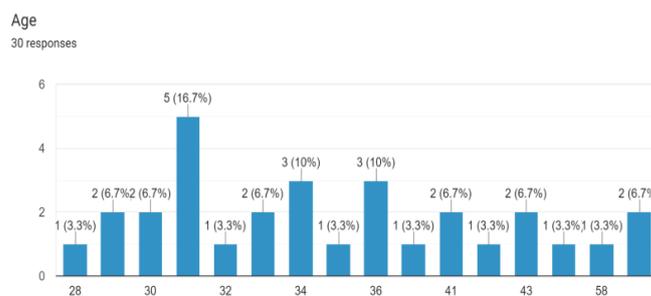
Gender	Number of participants
Male	18
Female	12



**Figure 1: Gender Distribution**

The age group most affected was 31 years and the least affected was 50 years [figure 2].

Age	Number of participants
28-32	11
33-40	10
41-60	9

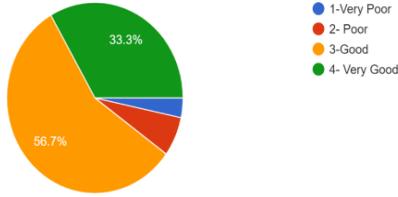


**Figure 2: Age distribution**

Around 90% patient has confirmed that the spray mechanism of BOHECO Ease oil was more than good [figure 3].

Spray ability	Percentage
>good	90%
<good	10%

Please rate the spray ability of the product on the basis of the following parameters.  
30 responses



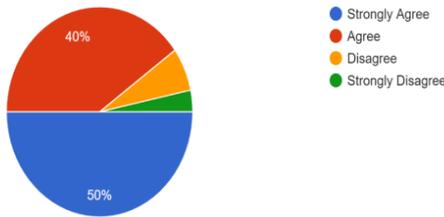
**Figure 3: Spray ability of product**

90% of patients have confirmed that Ease oil provides relief from muscle aches and sprains [figure 4].

Relief from ache	Percentage
Agree	90%
Disagree	10%

90% of patients have confirmed that there was a reduction in pain post-application of oil.

Does the product gives relief from muscle aches and sprains?  
30 responses

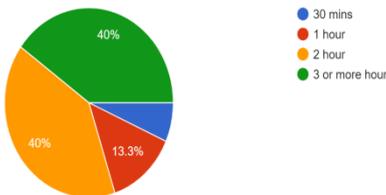


**Figure 4: Relief from Muscle ache**

80% of patients have agreed that the effect last for more than 2 hours [figure 5].

Lasting effect	Percentage
>2 hours	80%
<2 hours	20%

for how long does effect last post application  
30 responses

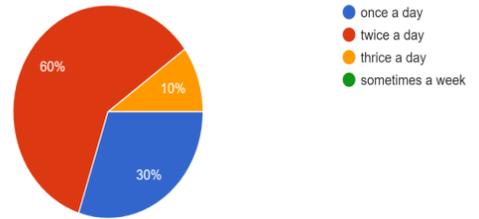


**Figure 5: Effect post application**

60% of patients were applying this oil twice a day [figure 6].

Frequency of use	Percentage
Twice a day	60%
Once a day	30%
Thrice a day	10%

Frequency of use in a day  
30 responses

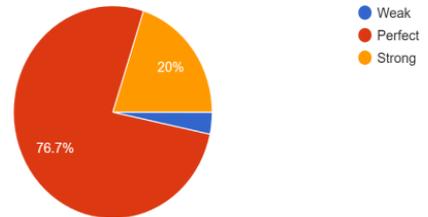


**Figure 6: Frequency of use**

76.7% of patients have confirmed that smell was perfect and 20% have agreed that smell was strong [figure 7].

Fragrance	Percentage
Perfect	76.7%
strong	20%
weak	3.3%

Please rate the fragrance levels of the product during application  
30 responses

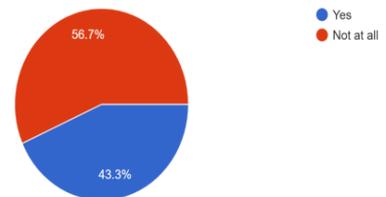


**Figure 7: Fragrance level**

56.7% of patients have said there were stains on clothes post-application [figure 8].

Stains clothes	Percentage
Yes	56.7%
No	43.3%

Does the product leaves stain on clothes post application?  
30 responses

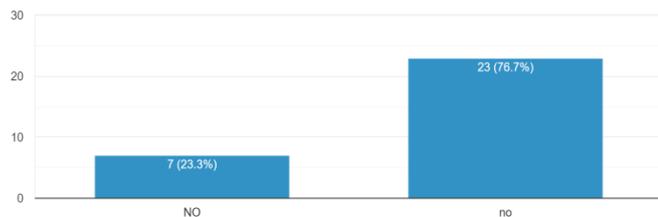


**Figure 8: Stain on clothes**

None of the patients have complained about any side effects and complications post application of this oil [figure 9].

Side effect/ Skin Irritation	Percentage
Yes	00%
No	100%

Does any of the product irritates your skin post use? If Yes, please mention the product code.  
30 responses



**Figure 9: Skin irritation post use**

## DISCUSSION

More males were using our products as compared to females. Pain was found mostly in age group of 28-40 years of age. Application of oil was easy on joints. No side effects or skin reaction was observed after application of oil. Patients had agreed that their pain was reduced post application of oil. The most common frequency of oil application was twice a day with an average lasting effect observed was 2-3 hours. *Vijaya* has *Shulahara* property because of which patients are having pain alleviating results. *Ushna Guna* helps reduces *Vata dosha* and thus reduces pain and inflammation around the joints. *Pachaka* property of *Vijaya* helps to reduce *Kleda* around the muscles and thus reduces inflammation. Menthol is a component of *Pudina Satva*, which enhances microcirculation in the nerve. Additionally, it promotes healthy neural function and lessens agitation and pain perception. Menthol increases oxygen uptake while lowering lactic acid generation in the muscle. Menthol is a vasoactive substance that selectively activates transient receptor potential melastatin-8 (TRPM8) channels. It has a calming impact when applied topically, acting as a counterirritant. The nociceptors are first stimulated, and then they become desensitised. Menthol administered topically may also open analgesic channels in the brain. Karpur Oil, which includes camphor, is claimed to trigger the TRPV1 and TRPV3 heat-sensitive vanilloid subtypes (TRPV3). Cold and warm feelings are produced when camphor is applied topically to the forearm flesh. Camphor is not concentrated in excessive amounts around free nerve terminals during the preliminary stages of stimulus. As a result, camphor makes you feel chilly. Over time,

there is a greater concentration of camphor around free nerve terminals. The warmth is then brought on by camphor.

## CONCLUSION

Ease oil has a potent effect on pain and inflammation on muscles. It should be applied twice a day for better results. It helps in managing symptoms of Myalgia. It was safe to use on long term basis.

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