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EFFECT OF HELICHRYSUM OIL ON MUSCLE SPASM

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ABSTRACT:

Helichrysum italicum is used for its medicinal properties and even nowadays, continues to play an important role in the traditional medicine for better treatment. Helichrysum italicum are popularly used for its pharmacological effect. This pharmacological effect of helichrysum oil is used for many research purposes. The main aim of the study is to determine the effect of helichrysum oil on muscle spasm. A 30 day trial on the use of helichrysum oil was conducted on 15 participants who suffered from muscle spasm. The patients were asked to apply this oil on the region of muscle spasm for about 30 days. The results were tabulated and analysed. 100% participants who suffered from severe muscle spasm started to use this oil. About 15 days later around 80% participants had moderate pain after using the helichrysum oil. After 30 days around 60% of the participants said they have mild or no pain. This study concludes that the use of helichrysum oil has shown a positive effect on the majority of the population. It has been observed there is an effect of helichrysum oil on muscle spasm. This is due to the anti-inflammatory property of this oil and therefore reduces pain.

INTRODUCTION:

Muscle spasm is also called muscle cramps. Spasm occurs when a muscle involuntary and forcibly contracts occurs that cannot be relaxed. The most common sites for muscle spasms to occur are the thighs, hands, arms, abdomen and sometimes along the rib cage as well. Muscle spasm ranges from high intensity to mild twitches to severe pain. Muscle spasm is caused due to

insufficient stretching before physical activity, muscle fatigue and dehydration [1]. Helichrysumitalicum plant is mainly found in the Mediterranean and southern parts of Europe. [2]. The most common name of helichrysum oil is curry plant which belongs to the family asteraceae[3]. This oil is predominantly found in the green parts of the plant, including stems and leaves. Dried flowers from the plant can also be used for medicinal purposes [4]. The essential oils are extracted from different parts of the plant like flowers, barks, stem, leaves, roots, fruits and other parts of the plant by various methods. Essential oil plays an important role in the treatment of several problems that includes depression, indigestion, headache, muscular pain, respiratory problems, and many more [5]. These essential oils are extracted from plants for use in herbal medicine. These practitioners ensure the key ingredients of the plant are very concentrated. Helichrysum is widely used as a strong anti-inflammatory, antimicrobial, antiproliferative, and in cosmetic, pharmaceutical, perfume, and alimentary industries [6].

Helichrysum oil has many benefits which include respiratory, digestive and skin inflammatory conditions. Therapeutic applications include antimicrobial uses and wound healing, as well as gall bladder disorders and analgesic uses. The anti-erythematous and photoprotective activities of its flavonoids of the helichrysumitalicum oil in humans, and to the anti-inflammatory properties exhibited by its flavonoids, acetophenones and phloroglucinols. It is believed that flowers and leaves are the most used parts in the treatment of health disorders such as allergies, colds, cough, skin, liver and gallbladder disorders, inflammation, infections and sleeplessness [7]. Helichrysum oil has been shown to have antibacterial properties against gram positive and gram negative bacterias[8].

The helichrysum extract has anti-inflammatory and antioxidant activities that has been used in various in-vivo and in-vitro methods. The anti inflammatory activity of helichrysum oil acts due to the effects of compounds that are expressed through a corticoid-like mechanism. The anti inflammatory activity of Helichrysumitalicum is by multiple effects, including inflammatory enzyme inhibition activity and corticoid-like effects [9]. There is still no proper explanation on how the Helichrysum oil reduces the muscle spasm or its anti-inflammatory effect. Researchers are still finding the reason for its anti inflammatory effect.

The main aim of the present study is to determine the effect of helichrysum essential oil on muscle spasm.

MATERIALS AND METHODS:

A 30 day trial on the use of helichrysum oil was conducted on 15 participants who suffered from muscle spasm. The patients were asked to apply this oil on the region of muscle spasm for about 30 days in the morning and in the night before sleeping. A pain scale was also given to the participants that ranged from 1 to 5. 0-1 is where there is absolutely no pain. 2- mild , 3-4 being moderate and 5 being the severe. Every 15 days interval, pain was noted from the participants by using the pain scale. After 30 days, all the results were observed and noted. The data was collected and analysed statistically.

RESULTS AND DISCUSSION:

The results from the present study shows that 100% participants who suffered from severe muscle spasm, started to use the helichrysum essential oil. About 15 days later around 80% of the participants felt moderate pain after using the helichrysum oil. After 30 days, 60% of the participants started to observe mild or no pain at all. It is evident that the anti-inflammatory properties of helichrysum oil acted on the muscle spasm and hence reduced the pain of the participants gradually.

A study by Hazem suggests that helichrysumitalicum has been a promising medicinal plant as an anti-inflammatory and as an antimutagenic agent. This inflammation reduction of helichrysum oil penetrates into the skin easily and reduces inflammation [10]. In the study done by Debra Rose, Wilson concludes that helichrysum oil also has been used in reducing high blood pressure. Helichrysum essential oil is also believed to have hypotensive properties which is used as a natural relaxant substance that helps in reducing blood pressure [11]. It is believed that one of the fastest acting pain relief compared to other essential oils is helichrysum essential oil. It is also concluded that although the price of helichrysum oil is quite high it is still considered by many people This preference is due to the fact that many sciatica patients have experienced pain relief within a few minutes of its application [12]. A study by Michelle suggests that helichrysum oil is one of the most effective at shrinking the appearance of varicose veins which are veins that are swollen, twisted that is seen under the skin. They usually occur in the legs. It is also believed to help with circulation and lessen inflammation. Helichrysum oil also works to remove blood clots [13]. A study by Cathy Wong suggests that helichrysum oil has a medicinal scent and its properties are often used to reduce inflammation and to promote healing of wounds, boosts the immune system, and soothes or calms the body and mind. In the previous study helichrysumitalicum and its cortisone-like properties shows its anti-inflammatory activity, and a better phytochemical character. Helichrysumitalicum is also found in the world of perfumes and fashion to the world of medicine. A study by G.Cristofari suggests that helichrysumitalicum oil is served as one of the best inhibitors for corrosion of mild steel in hydrochloric acid medium [14]. A study concludes that helichrysumitalicum oil is a well-known medicinal plant for its hepatoprotective and antioxidant properties that is widely used in Serbia [15].

The present study was done within a small population. The study can be expanded to a wider population for many people to know the benefits of helichrysum oil. The action of helichrysum oil is not as an anti-inflammatory property has not been explained properly. Further studies can be done on how helichrysum acts in healing wounds and acts as anti-inflammatory.

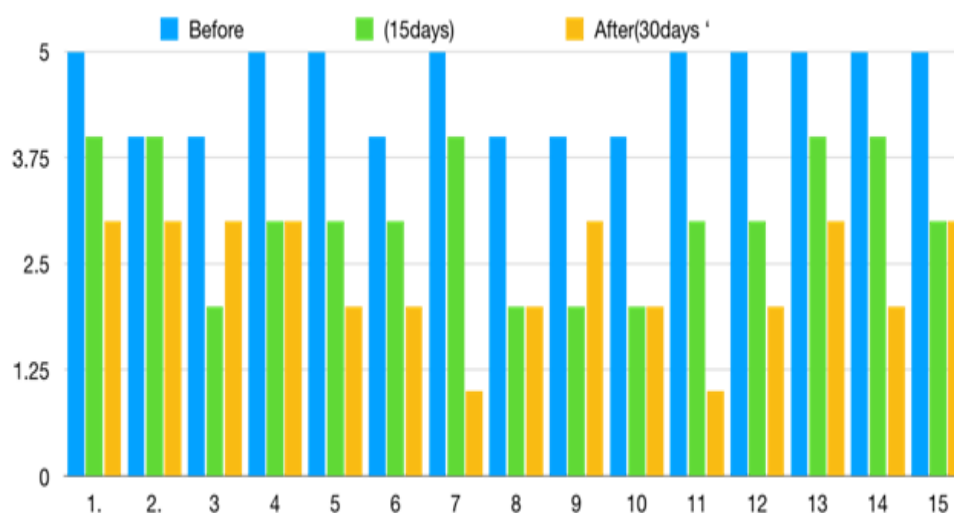


Figure 1: The bar graph represents the effect of helichrysum oil on spasm. The X axis represents the number of participants and the Y- axis represents the pain level. The blue colour represents before the use of helichrysum oil by the participants, green colour represents the use of helichrysum oil by the participants on 15th days and the yellow colour represents the use of helichrysum oil after 30 days. It is seen that the pain level of the spasm has been gradually decreasing after the use of helichrysum oil after a 30 day trial.

CONCLUSION:

From the present study it is evident that the use of helichrysum oil has shown a positive effect in reducing muscle spasm gradually. Helichrysum essential oil is used for many other purposes because of the presence of medicinal components in it.

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