



Devising a Treatment Plan considering the Impact of Thermoregulated Feature of *Salvia sclarea* (Clary Sage) Essential Oil. The Cases of Hot-flashes with Hypertension and Menopause

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ABSTRACT

Salvia sclarea (clary sage) is an essential oil known for its calming and pain relieving properties. In the past, it was used to treat depression in menopausal women. However, it can also be used in terms of relaxing one's body, relieving menstrual cramp, alleviating hot flashes, and boosting immunity. With so many clinical applications, this paper explains how this essential oil brings additional benefits through thermoregulation and patency together which can shed light in bringing the therapeutics of this essential oil to a safer but also more effective applications. In this paper, a blend was introduced to treat hot flashes due to hypertension and menopause, the rationale will be discussed. Moreover, the depth of the penetration against the effectiveness will be studied to yield a more complete and thorough results that will give a more precise picture on what elements should be included in doing a thermoregulated study. This study also points out that replenishment is a very important element in an anti-inflammation treatment plan. Without it, the desired results may not be able to achieve.

Keywords: Clinical aromatherapy; Clary sage; Hypertension; Menopause; Hot flashes; Cold therapy; Thermoregulation

INTRODUCTION

Hot flash is a sudden, intense, and uncontrolled rise in temperature that impacts the upper body. This temperature rise results in rise in heartbeat, night sweats, and agitation [1,2]. Hormone therapy is believed to be an effective way of relieving hot flashes due to the involvement of estrogen [3]. Due to public's perceived risk associated with hormonal therapy, an alternative way such as thermoregulation to lower body temperature the body temperature is proposed [ibid]. There has been research attempted to find out some alternative ways to resolve this issue, this paper build on the past research effort to improve the effectiveness and safety. In the study, it was found out that a case early stage of menopause reversed.

Theoretical framework

Based on the earlier description of hot flash, it appears that lowering the body temperature is a treatment [4]. To lower body temperature, we need to identify the location of the heat source. In this paper, it is assumed that source of heat is the cell. More specifically, the heat

is from the mitochondrial inflammation. With this hypothesis, the treatment of the hot flashes should be employing a healing agent that cools the body, have anti-inflammatory properties, and replenishes the elements whose depletion causes mitochondrial inflammation. It is hypothesized that clary sage is a healing agent that can perform all the functions stated. A case study will be employed to verify this hypothesis.

To verify the healing properties of clary sage, a blend of multiple essential oils is used. This blend includes clary sage [5], *Salvia rosmarinus* ct camphor (rosemary c.t. camphor), *Boswellia carterii* (frankincense), and *Lavandula angustifolia* (lavender). The reason for adding other essential oils is as follows. Rosemary activates ketone content [6] and patency which helps cooling. Frankincense and lavender provide a calming and soothing effect [7]. They also help clary sage penetrate deep to the bone and cool the bone. The choice of essential oils is based on two criteria. First is the layer where essential oils can reach such as skin, soft tissue/organ, mitochondria, or bone. Second is the effectiveness of results they deliver in terms of immunity-boost, cooling down, anti-

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inflammatory and replenishing ketone. These are shown in the tables below: A list of functions of various essential oils is shown in

Table 1. A summary of penetration depth of various essential oils is shown in Table 2.

Table 1: Effectiveness of various essential oils in various functions.

Essential oil	Effectiveness			
	Immunity-boost	Cold therapy	Anti-inflammatory	Ketone replenishment
Clary sage	Strong	Strong	Strong	Strong
Rosemary c.t. camphor	Strong	Strong	Moderate	Strong
Lavender	Moderate	Weak	Moderate	Weak
Frankincense	Moderate	Weak	Moderate	Weak

Table 2: Depth of penetration of various essential oils.

Essential oil	Depth of penetration		
	Skin	Soft tissue or organ	Bone or mitochondria
Clary sage	Yes	Yes	Yes
Rosemary c.t. camphor	Yes	Yes	Yes
Lavender	Yes	Yes	No
Frankincense	Yes	Yes	No

CASE REPORT

Hot flash is a symptom of hypertension. There is a case study of an over 65 woman who has hypertension (blood pressure measured 140 mmHg/95 mmHg). This subject exhibited hot flashes. This subject refused to take conventional medicine to treat hypertension [8]. Initially, the subject was given treatment without clary sage. The blood pressure was kept around 132 mmHg/78 mmHg. The subject received treatment once a month. However, no significant reduction of blood pressure and hot flash symptoms was observed. She was given the clary sage blend mentioned earlier in this paper.

She applied it two to three times a day from her sternum to both collar bones. After a week, she reported that she needed to drink hot fluid but not cold fluid. She also reported that she could sleep at night without interruption. In addition, she experienced no hot flashes or night sweats. She once twisted her left leg and the pain in her leg disappeared. She used to have a headache and that symptom went away. After one month of new treatment, her blood pressure was measured 108 mmHg/75 mmHg. She also reported 50% lower stress level. The only side-effect of this blend is the cooling in the mitochondrial level made her experience the symptoms of catching cold such as mild coughing and sneezing. This side-effect was reduced when she drank hot fluid and took hot food.

The same essential oil blended has been used on another subject over 50 years old. This subject was in the early stages of menopause and experienced hot flashes/night sweats with no menstruation for one year. After three applications of the blend for 3 days, her menstrual flow appeared for the next three months. The subject reported increased blood flow if she applied this blend before menstruation. The subject also reported the disappearance of hot

flashes and night sweats. The only side-effect was catching cold and had some mild cough and sneezes.

Future research

There may be other ailments that resulted from the increase in body temperature. More research is needed to identify those ailments and the effectiveness of clary sage on treating those ailments [9,10,11]. Since the studies of clary sage focused on females. There is a question: Does essential oil affect a person's hormone levels? Studies need to be conducted to determine the effect essential oils on hormones. This is important in the sense that by only relying on the effectiveness of an essential oil is not enough, as this triggers the question: is essential oil safe for both genders?

CONCLUSION

Based on the studies mentioned earlier, the effect of clary sage on cooling the body and alleviating hot flashes has been validated. To devise an effective treatment plan, we have to account the immunity boost, cold therapy, anti-inflammation and ketone replenishment against the depth of body penetration skin, soft tissue/organ, mitochondrial/bone levels. While the past research focuses on hormonal changes, this paper attempts to resolve the mitochondria inflammation that brings more effective and long-lasting results.

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