

Comparative study of the effect of lavender and rosemary oil in relieving pain

A. Sankari Nivedhitha, R. Gayatri Devi*, A. Jyothipriya

ABSTRACT

Introduction: Pain is defined as highly unpleasant physical sensation. Lavender oil is an anti-inflammatory that relieves pain around joints. It is helpful to calm and relax. Rosemary oil has the ability to ease pain and inflammation. The aim of this study is to compare the effect of lavender and rosemary oil on joint pain. **Materials and Methods:** Sample size was 30. Those who are suffering from joint pain were included in the study. They were divided into two groups. Pain was measured using scale. Pain scale was noted before and after applying oils. Duration of the study was 30 days. Data were collected and analyzed. **Results:** About 60% of people in Group 1 and only 40% in Group 2 were fully recovered from pain. None in Group 1 falls in severe pain, but 12% of people in Group 2 fall in severe pain at the end of the study. **Conclusion:** Hence, from this study, lavender oil has a very good effective role on pain than rosemary oil.

KEY WORDS: Pain, Rosemary oil, Lavender oil, Effectiveness

INTRODUCTION

Pain is a distressing feeling often caused by intense or damaging stimuli. Pain is defined as “an unpleasant sensory or emotional experience associated with actual or potential tissue damage” by the World Health Organization.^[1] Pain has negative effects to the quality of life which includes physical activity, social performance, emotional functioning, social activity, and energy level.^[2] About 65% of the people suffers from joint pain. Joint pain is the very common pain felt by many at the age starting between 30 and 50-year-old. Joint pain can be referred to as discomfort causing soreness or aches in any part of joints in the body. Joint pain is the major symptom of arthritis, osteoarthritis, muscle strain, etc.^[3] Essential oil is fragrant producing substance found in the root, stem, petals, and other plant parts. Essential oil is prepared by steam distillation. Essential oil consists of both saturated and unsaturated hydrocarbon, aldehydes, alcohols, aldehydes, esters, ethers, ketones, oxides, phenols, and terpenes that produce odors.^[4,5] They alternative source for relieving pain other than medications is applying essential oil.^[6] There are many essential oils

used in relieving pain, for example, peppermint oil, eucalyptus oil, lemongrass oil, lavender oil, rosemary oil, etc.^[7] Among which lavender oil was named as “Herb of the year 1999” by the International Herb Association for its therapeutic and commercial value.^[8]

Lavender (*Lavandula officinalis*) belongs to the family Lamiaceae, is the herb of the garden. It comprises camphor, terpinen-4-ol, linalool, linalyl acetate, beta-ocimene, and 1,8-cineole.^[9] Lavender oil is an effective analgesic and anti-inflammatory.^[6] Rosemary (*Rosmarinus officinalis*) is evergreen shrub with needle-like leaves and woody aroma.^[10] It belongs to the family Lamiaceae and bears small pale blue flowers in late spring.^[8] Rosemary oil is a native of Mediterranean region that is grown all over the world for its medicinal purpose. Rosemary oil is mild analgesic and anti-inflammatory; besides, it also possesses antitumor effects.^[11] A research study states that locomotor activity of a mice increased on inhalation of rosemary essential oil, which was considered phototherapy as activating and refreshing remedy.^[12]

MATERIALS AND METHODS

The sample size taken for this study was 30. Those who were suffering from joint pain were included in the study. They were divided into two groups of 15 in each group.

- Group 1: Applying lavender oil for 15 patients.

Access this article online

Website: jprsolutions.info

ISSN: 0975-7619

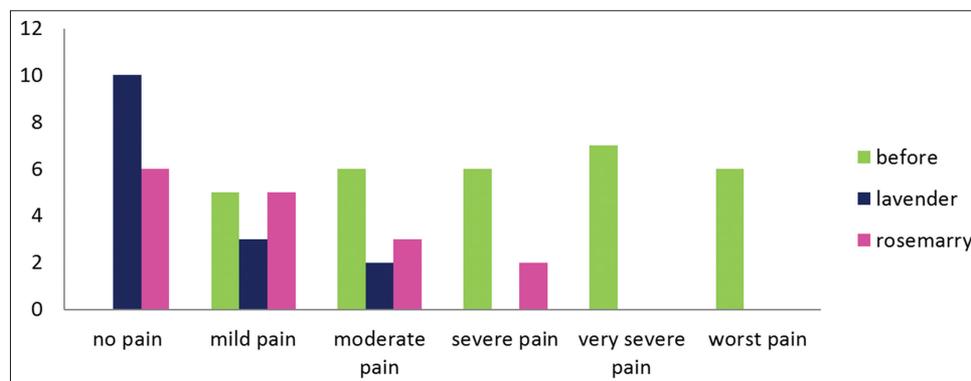
Department of Physiology, Saveetha Dental College, Saveetha Institute of Medical and Technical Science, Saveetha University, Chennai, Tamil Nadu, India

*Corresponding author: R. Gayatri Devi, Department of Physiology, Saveetha Dental College, Saveetha Institute of Technical and Medical Science, Saveetha University, 162, Poonamallee High Road, Chennai - 600 077, Tamil Nadu, India. E-mail: gayatri.physio88@gmail.com

Received on: 09-11-2018; Revised on: 14-12-2018; Accepted on: 28-01-2019

Table 1: Pain scale of the before and after applying oil

Pain scale	Before applying oil	After applying oil in Group 1	After applying oil in Group 2
0 – no pain	-	10	6
1 – mild pain	5	3	5
2 – moderate pain	6	2	3
3 – severe pain	6	0	2
4 – very severe pain	7	0	0
5 – worst pain	6	0	0

**Figure 1:** To compare the effectiveness of the oil

- Group 2: Applying rosemary oil for 15 patients.

Pain was measured using pain scale. Pain was measured before and after applying oil and noted at a regular interval of 10 days. The duration of the study was about 30 days. Data were collected and analyzed.

RESULTS

About 60% of people in Group 1 and only 40% in Group 2 were fully recovered from pain. None in Group 1 falls in severe pain, but 12% of people in Group 2 fall in severe pain at the end of the study.

DISCUSSION

All the 30 patients were suffering from joint pain before conducting the study and none had no pain [Table 1 and Figure 1]. However, after applying the oil, many of the patients were relieved from pain. From the results obtained, we can interfere that 60% of people in Group 1 and only 40% in Group 2 were fully recovered from pain. From the graph above, we can say that none of the patient suffered very severe and worst pain after applying the oil. No one in Group 1 falls in severe pain, but 12% of people in Group 2 fall in severe pain at the end of the study [Figure 1]. Hence, the patients who used lavender oil had better effects to that of rosemary oil. The lavender oil is as effective as tramadol which is commonly prescribed under medication for joint pain.^[6]

CONCLUSION

In this study, both lavender and rosemary oil relieved pain, but the effectiveness of lavender oil in relieving pain was more when compared to rosemary oil.

REFERENCES

1. Pain terms: A list with definitions and notes on usage. Recommended by the IASP subcommittee on taxonomy. Pain 1979;6:249.
2. Gamondi C, Galli N, Schönholzer C, Marone C, Zwahlen H, Gabutti L, et al. Frequency and severity of pain and symptom distress among patients with chronic kidney disease receiving dialysis. Swiss Med Wkly 2013;143:w13750.
3. L. Laslett y, P. Otahal y, E. Hensor z, S. Kingsbury z, P. Conaghan. Understanding the biomechanical “spread” of joint pain: knee pain predicts subsequent shoulder pain and this is mediated by leg weakness. Data from the osteoarthritis initiative. Osteoarthritis and Cartilage. 2015; 23S(2): A353.
4. Schiller DS. 500 Formulas for Aromatherapy: Mixing Essential Oils for Every Use. USA: Sterling Publications; 1994.
5. Wildwood C. The Encyclopedia of Aromatherapy Therapy. Rochester: Healing Arts Press; 1996.
6. Wilson DR. Written by Emily Cronkleton. Acad Bras Cienc 2015;87 2 Suppl:1397-408.
7. Martínez AL, González-Trujano ME, Chávez M, Pellicer F. Antinociceptive effectiveness of triterpenes from rosemary in visceral nociception. J Ethnopharmacol 2012;142:28-34.
8. International Herb Association. The International Herb Association: Uniting Herb Professionals for Growth through Promotion and Education 2007-2017. International Herb Association; 2017.
9. Price S. The Aromatherapy Workbook. London: Thorsons; 1993.
10. de Oliveira JR, Camargo SEA, de Oliveira LD. *Rosmarinus officinalis* L. (rosemary) as therapeutic and prophylactic agent. J Biomed Sci 2019;26:5.
11. Sayorwan W, Ruangrunsi N, Piriyanunporn T, Hongratanaworakit T, Kotchabhakdi N, Siripornpanich V, et al. Effects of inhaled rosemary oil on subjective feelings and activities of the nervous system. Sci Pharm 2013;81:531-42.
12. Kovar KA, Gropper B, Friess D, Ammon HP. Blood levels of 1,8-cineole and locomotor activity of mice after inhalation and oral administration of rosemary oil. Planta Med 1987;53: 315-8.

Source of support: Nil; Conflict of interest: None Declared