



Effectiveness of Lavender Aroma Therapy on Post-Section Caesarea Pain Intensity in the Obstetric Room Bhayangkara Padang Hospital

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Received: 05-10-2023

Reviewed: 10-10-2023

Accepted: 01-11-2023

Abstract

Section caesarea delivery has an impact on a higher level of pain in the operated abdomen compared to normal delivery. One therapy that can be given is lavender aromatherapy. This aromatherapy contains ingredients that can increase alpha waves in the brain, thus making the mother feel relaxed. The purpose of the study was to see the effectiveness of giving lavender aromatherapy to the intensity of post section caesarea pain in the Midwifery Room of Bhayangkara Hospital Padang in 2022. This type of research is a quasi-experimental study with a One-Group Pre-Test-Post-Test approach which was carried out from June-August 2022. The population of all post section caesarea mothers was 57 people with a purposive sampling technique of 16 people. Collecting data using observation sheets. The data were computerized with univariate and bivariate analysis using the Wilcoxon test with a significance level of $\alpha = 0.05$. The results obtained that the average post section caesarea pain before being given lavender aromatherapy was 5.63 and reduced after being given lavender aromatherapy was 3.38. The results of the bivariate analysis showed the effectiveness of giving lavender aromatherapy to the intensity of post section caesarea pain ($p = 0.000$). The results of the study concluded that there was an effectiveness of giving lavender aromatherapy to the intensity of post section caesarea pain, it is hoped that nurses would apply lavender aromatherapy for caesarean post section patients as an alternative in pain management and apply other therapies as companion therapy to reduce postoperative pain intensity.

Keywords: Aromatherapy Lavender, Pain, Section Caesarea

Introduction

Sectioni Caesarea (SC) is an artificial labor process performed surgically by making an incision in the abdominal wall and uterine wall of the mother. This action causes pain and results in changes in tissue continuity (Tirtawati, 2020). Any feeling of pain of moderate to strong intensity is accompanied by anxiety and a strong desire to detach from or negate that feeling. Pain is the body's defense mechanism, arising when there is damaged tissue and this will cause individuals to react by moving the pain stimulus (Guyton & Hall, 2015).

Data from the World Health Organization (WHO) sets the average standard of Sectioni Caesarea in a country is around 5-15% per 1000 births in the world, government hospitals are 11% while private hospitals are more than 30%. According to WHO, in 2019 the number of deliveries with the Sectioni Caesarea method worldwide exceeded the limit of the 15% range recommended by WHO in up.

The incidence of Sectioni Caesarea in Indonesia continues to increase both in government and private hospitals. The results of Riskesdas in 2018 showed that the incidence of childbirth with Sectioni Caesarea was 17.6%, the highest in the DKI Jakarta region (31.3%) and the lowest in the Papua region (6.7%) (Riskesdas, 2018). Data from the West Sumatra Provincial Health Office, states that Sectioni Caesarea childbirth cases are still high in West Sumatra, where one of the government hospitals as a referral hospital from various regions, namely Dr. M.Djamil Padang Hospital in 2017 as many as 1089 cases and in 2018 as many as 1239 cases. This illustrates that cases of Sectioni Caesarea are still high every year in West Sumatra (West Sumatra Provincial Health Office, 2019).

The impact of pain on post-SC patients will result in limited maternal mobilization. Therefore, pain management during post SC, especially on the first day, is very necessary (Safaah, 2019). Pain is a sensory experience

Treatment that is often used to reduce post-sectioni caesarea pain is in the form of pharmacological treatment. Pharmacological pain control is effective for moderate and severe pain. However, pharmacological administration does not aim to improve the client's own ability to control his pain. So a combination of pharmacology is needed to control pain with non-pharmacology so that pain sensation can be reduced and the recovery period does not extend (Anwar, 2018).

Nonpharmacological management that is often given includes relaxation, breathing techniques, movement / position change, massage, acupressur, hot / cold therapy, hypnobirthing, music, aromatherapy, and TENS (Transcutaneous Electrical Nerve Stimulation) (Potter and Perry, 2015). One of the non-pharmacological therapies that can be used is aromatherapy. The effect of aromatherapy is positive because the fresh and fragrant aroma stimulates the sensory and eventually affects other organs so that it can cause the same effect.

Literature Review

Section caesarea can have a physical impact on causing pain in the dissected abdomen which has a higher pain rate of around 27.3% when compared to the normal method of childbirth which has a lower pain level of around 9% (Puspita, 2020). Research conducted by Prasetyo (2020), found that mothers who give birth by cesarean section cause impacts such as panic, stress, and Early Breastfeeding Initiation (IMD) is not fulfilled, thus affecting their milk expenditure.

The impact of pain on post-SC patients will result in limited maternal mobilization. Therefore, pain management during post SC, especially on the first day, is very necessary (Safaah, 2019). Pain is a sensory experience brought on by a stimulus as a result of tissue damage (Potter and Perry, 2015).

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Aromatherapy is a complementary therapy in nursing practice that involves the use of fragrances from essential oils, derived from plants, and can be combined with base oils (medicinal blend oils) that can be inhaled or applied during massage on intact skin (Safaah, 2019). Aromatherapy encourages the release of neurotransmitters, such as encephalines and endorphins that have an analgesic effect and produce a feeling of calm. Other neurotransmitters secreted can improve mood. The analgesic effects of essential oils in the context of a holistic approach to chronic pain management, can be used as an adjunct or alternative to conventional medical approaches. Lavender aromatherapy oil is known as a sedative oil, the sedative effect of *lavandula angustifolia* occurs due to the presence of coumarin compounds in the oil (Haniyah, 2017).

Lavender is the type of aromatherapy that is most widely used by the community and has many benefits in life, including as an analgesic agent (Harnita, 2021). Lavender aromatherapy has the main content, namely linalool. Linalool has the effect of increasing alpha waves in the brain and these waves help to relax and inhibit the prostanoic system involved in PGE2 production. Smells affect the brain to distinguish more than 100,000 different odors. These smells affect parts of the brain related to mood, emotions, memory and learning (Puspita, 2020).

Research conducted by Prasetyo (2020) on the effectiveness of lavender aromatherapy on reducing maternal wound pain post Section Caesarea at RST dr. Soepraoen Kesdam V Brawijaya Malang. The results of the study found the effect of lavender aromatherapy on reducing maternal wound pain post Section Caesarea ($p = 0.021$). Giving lavender aromatherapy will stimulate the release of enkephalin hormones, serotonin and endorphins. Enkephalin is thought to cause presynaptic inhibition and postsynaptic inhibition of type C and delta A pain

fibers where they synapse in the dorsalis commu. Such processes achieve inhibition by inhibition of calcium channels. The inhibition of pain is by blocking pain receptors so that pain is not sent to the celebrity cortex and will subsequently reduce pain perception (Anwar, 2018).

Based on the results of theory and the results of existing research, it can be concluded that the provision of lavender aromatherapy is thought to have the potential as an alternative to reduce the pain of post Sectio Caesarea patients in non-pharmacological treatment, so it is necessary to conduct research entitled the effectiveness of lavender aromatherapy on the intensity of post-Sectio Caesarea pain.

Research Method

This research will be carried out in June – August 2022 in the Midwifery Room of Bhayangkara Padang Hospital. The population in this study was all post-Sectio Caesarea mothers in the Midwifery Room of Bhayangkara Padang Hospital in July – August 2022. While the sample was obtained as many as 16 people. This type of research is pre-experimental design with One Group pre-post design. Research conducted with one group given certain treatment, then observed before and after treatment. The data were analyzed using the Wilcoxon test because the Shapiro-Wilk test score was obtained at $p < 0.05$. The results of the analysis were expressed with a confidence level of 95% ($\alpha = 0.05$) and the data was processed using SPSS.

Result

The Effectiveness of Lavender Aromatherapy on Post Sectio Caesarea Pain Intensity

Table 1. The Effectiveness of Lavender Aromatherapy on Post Sectio Caesarea Pain Intensity in the Obstetrics Room of Bhayangkara Padang Hospital in 2022

Variabel	Mean	STD	Deviation p value	
Pain Post SC :				
Pretest	5,63	0,500	-3,630	0,000
Posttest	3,38	0,619		

Based on table 4.4, the average post-sectio caesarea pain before lavender aromatherapy was 5.63 and after lavender aromatherapy was 3.38. The results of Wilcoxon's statistical test obtained p value = 0.000, meaning < 0.05 , it can be seen that there is an effectiveness of lavender aromatherapy on post-Sectio Caesarea pain intensity in the Obstetrics Room of Bhayangkara Padang Hospital in 2022.

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Discussion

Based on the results of the study, it was found that the average post-section caesarea pain before lavender aromatherapy was 5.63 and after lavender aromatherapy was 3.38. The results of Wilcoxon's statistical test obtained p value = 0.000, meaning < 0.05 , it can be seen that there is an effectiveness of lavender aromatherapy on post-Section Caesarea pain intensity in the Obstetrics Room of Bhayangkara Padang Hospital in 2022.

The results of this study are in line with research conducted by Prasetyo (2020) on the effectiveness of lavender aromatherapy on reducing maternal wound pain post Section Caesarea at RST dr. Soepraoen Kesdam V / Brawijaya Malang. The results of the study found the effect of lavender aromatherapy on reducing maternal wound pain post Section Caesarea ($p = 0.021$). This research is also in line with research conducted by Mutia (2018) on the effect of lavender aromatherapy on reducing the intensity of pain in patients after section caesarea surgery in the Pomegranate Room of Dr. H. Abdul Moeloek Hospital, Lampung Province. The results of the study found the effect of lavender aromatherapy on reducing the intensity of pain after section caesarea surgery ($p = 0.000$).

According to Smeltzer and Bare in Safaah (2019), the postoperative pain state of Section Caesarea in mothers will be a disorder that causes limited activity in mothers. For this reason, pain management is needed to reduce the pain response experienced so that the pain felt by the mother can be reduced, one of which is by providing lavender aromatherapy.

The mechanism of action of aromatherapy in the human body takes place through two physiological systems, namely body circulation and olfactory system. Fragrances can affect a person's psychic, memory, and emotional state. Lemon aromatherapy is a type of aromatherapy that can be used to overcome pain and anxiety (Rahmawati, 2020).

The use of aromatherapy by inhalation can stimulate the release of endorphins so as to reduce pain. Lavender aromatherapy works to stimulate olfactory nerve cells and affect the limbic work system. The limbic system is the center of pain, pleasure, anger, fear, depression, and a variety of other emotions. The hypothalamus, which acts as a relay and regulator, raises messages to the brain and other parts of the body. The message received is then converted into action in the form of the release of the hormones melatonin and serotonin which cause euphoria, relax or sedative. Lavender aromatherapy is very effective and beneficial when inhaled or used on the outside because the sense of smell is closely related to human emotions and the body will provide a psychological response (Kakuhese, 2019).

Giving lavender aromatherapy will stimulate the release of enkefalin hormones, serotonin and endorphins. The gate control theory proposed by Melzack and Wall that pain impulses are inhibited when a defense is closed, so as to reduce the intensity of pain felt. It is stated that aromatherapy will stimulate the release of the hormones enkefalin, serotonin and endorphin. Enkefalin is thought to cause presynaptic inhibition and postsynaptic inhibition of type C and delta A pain fibers where they synapse in the dorsalis commu. Such processes achieve inhibition by inhibition of calcium channels. The inhibition of pain is by blocking pain

receptors so that pain is not sent to the celebrity cortex and will subsequently reduce pain perception (Anwar, 2018).

Aromatherapy encourages the release of neurotransmitters, such as encephalines and endorphins that have an analgesic effect and produce a feeling of calm. Other neurotransmitters secreted can improve mood. The analgesic effects of essential oils in the context of a holistic approach to chronic pain management, can be used as an adjunct or alternative to conventional medical approaches. Lavender aromatherapy oil is known as a sedative oil, the sedative effect of *lavendula angustifolia* occurs due to the presence of coumarin compounds in the oil (Haniyah, 2017).

The researchers' assumption is that there is an effectiveness of lavender aromatherapy on post-Sectio Caesarea pain intensity because lavender aromatherapy is one of the complementary therapies in the form of breathing relaxation technique exercises. Post sectio caesarea mothers can practice breathing techniques using lavender aromatherapy correctly for 15 minutes, which is done when the mother feels pain in the wound of sectio caesarea surgery.

Giving lavender aromatherapy can provide calm and comfort to the mother. In addition, it can also reduce the pain caused by surgery, so that the pain is reduced. Inhaled lavender aromatherapy can relax tense muscles so that it can smooth blood flow due to dilation of narrowed blood vessels, thereby reducing the intensity of pain felt by post-sectio caesarean mothers.

Conclusion

Based on the results of research conducted, there is an effectiveness of lavender aromatherapy on post-sectio caesarea pain intensity in the obstetrics room of Bhayangkara Padang Hospital in 2022 ($p = 0.000$). It is expected that health workers, especially midwives or nurses in the hospital, will apply lavender aromatherapy for treatment for post sectio caesarea patients and collaborate with other officers as an alternative in pain management management. In addition, lavender aromatherapy is recommended to be applied and combined with other complementary therapies as a companion therapy or as part of nursing intervention in the provision of nursing care in patients experiencing postoperative pain.

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