

Lavender Aromatherapy to Reduce the Intensity of Post Sectio Caesaria Pain

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Abstract: *Caesarean sectio is a process of artificial birth that made an incision or surgery on the abdominal wall and uterus to deliver babies who cannot be born normally. This study used true experimental design, randomized pretest-post-test design with simple random sampling tehnicque. The treatment group was given lavender aromatherapy and the control group was gived placebo (oil with lavender aroma). Patients who had inclusion and exclusion criteria were given lavender aromatherapy previously then they measured for pain intensity and after 10 minutes of administration with inhalation used an electrical aromatherapy lamp. The Mann Whitney test results that there was significant difference between the treatment group and the control group. Value of $p = 0,000$, the reduction pain intensity in the group that gave aromatherapy more effective than the group that gave only placebo. Conclusions of this research is aromatherapy of lavender more effective in reducing pain intensity than the placebo group.*

Keywords: Caesarean sectio, pain, lavender aromatherapy.

1. Introduction

Cesarean sectio is a surgery for childbirth through incisions in the abdominal wall and uterus [1]. Caesarea sectio come from latin language which mean cut or slash, in obstetrics caesarea section is turn on surgery the purpose of giving birth to baby by opening the mother's stomach and uterine wall. Labor by sectiocaesarea for certain medical indication, which devide into indication of mothers or baby [2].

Medical Record data in 2016 at RSUD Raja Ahmad Thabib Riau Islands Province found 576 cesarean sectio cases, interviews result in the Obstetrics and Gynecology Room, the range of postpartum cesarean mother's 8-12 patients with an average monthly rate reaching 32-48 case.

Preliminary study conducted that almost all patients who underwent cesarean section use regional anesthesia, namely spinal anesthesia, with an average of treatment for 4-5 days. The drugs used in treating pain were an anti-drugs pain (analgesic) which is given by injection or is distilled into intravenous fluid. Surgery for the cesarean section will give result in the impact of an incision pain. Cesarean section pain is a natural thing when the anesthesia effect has run out. Pain is generally described as an unpleasant sensory and emotional experience due to actual and potential tissue damage [3].

Patients with cesarean sectio generally complain pain around the surgical wound. This pain causes a person tends to be reluctant to move and afraid to carry out activities, so that there will be a possibility for deep vein thrombosis, it caused increased blood viscosity due to hemoconcentration mechanisms that occur in postpartum mothers. In addition, limiting movement can slow the healing process of the wound. The length of the wound healing process will result in the number of treatment costs [4].

Handling of pain is divided into two ways, pharmacological and non-pharmacological methods. Pharmacological treatment with cesarean section is done by giving painkillers (analgesics) either orally or injection. Besides pharmacological therapy, pain management can also be done

with some non-pharmacological therapies such as acupressure therapy, changing the position of the patient as comfortable as possible, doing distraction techniques, relaxation techniques, acupuncture therapy, aromatherapy. Aromatherapy is a treatment derived from essential oils from plants. The oil can be absorbed into the body through the skin or olfactory system, the resulting aroma activates the sense of smell [4].

Aromatherapy is a alternative medicine that uses plant material and aromatic plant's. Based of concept uses aromatherapy as therapeutic agent by three mechanism. Firstly, stimulates the nerves which sends impulses to hippocampus that controls memory and emotion. Second, essential oil interacts with hormone and enzym that cause changes pulses, blood pressure, and budy function. Thirdly, stimulates body to produce pain-fighting substances and such act as analgesic agent [5].

Aromatherapy is also known as aromatic treatment, is a combination of art and science that uses plant oils for health, well-being, and treatment [6]. Various types of essential oils are used for aromatherapy, such as Melissa, eucalyptus, and lavender. The oil fuctions are relaxing, reducing pain, stress, and improving health [7]. Based on Widayani (2016) there was a decrease in the intensity of perineal suture pain before and after lavender aromatherapy was given. Lavender aromatherapy significantly affects the reduction of perineal suture pain in postpartum mothers with a p-value of 0.01 [8]. Based on research from Metawie et al (2015) lavender oil effectively reduces pain in patients after surgery for cesarean section compared with placebo. Lavender oil with inhalation is a non-invasive and non-pharmacologic intervention for the pain management postoperative cesarean section [9].

Based on study of Dwijayanti W, Sumarni S and Ariyanti I (2014) showed that before the inhalation of lavender aromatherapy on average pain intensity on a scale of 5.44 (range 2-9). After the inhalation of lavender aromatherapy, the pain intensity decrease mean scale of 4.31 (range 1-7), $p=0.001$ [10]. Research based on Lamadah, S.M, and Nomani, I (2016) that lavender oil used for massage can

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reduce the level of pain and anxiety during labor in primigravida [11].

The results of literature studies state that aromatherapy lavender can reduce pain in postoperative patients with various concentrations. This study was conducted on maternal patients post operative sectio caesarea by using lavender aromatherapy with a small concentration of 1%.

2. Methods

This study used true experimental design with a randomized pretest-posttest design, which compares the subjects before and after being given lavender aromatherapy to pain in post-caesarean sectio patients. The inclusion and exclusion criteria in this study were in table 1.

Table 1. The Inclusion and Inclusion Criteria

Inclusion	Exclusion
Respondents experienced pain due to cesarean section injuries	Respondents did not have a history of asthma,
Respondents with moderate severe pain levels	Did not have a skin rash or itching and did not experience olfactory sensory disorders
2nd day cesarean sectio respondents	Respondents were conscious and could be actively invited to communicate
Respondents were given analgesics which were distilled into infusion	Respondents were willing to be the subject of research.
Respondents were hospitalized in Obstetrics and Gynecology Room Raja Ahmad Thabib Hospital Riau Islands Province	

The implementation phase in this study was data collection, the researchers asked the names of patients where the patients experienced pain on the second day post-caesarean section, after obtaining information about the patient then went to the patient's room and performed matching based on the inclusion and exclusion criteria in patients who will be used as respondents. Researchers conducted data collection by pretest and post-test. The researcher explained the purpose of the study and then reviewed the pain scale of the respondents using a numeric rating scale of 0-10.

Respondents were asked to say their pain feeling if it was in accordance with the criteria and willing to be a respondent then the patient signed the approval sheet. Then the provision of aromatherapy, which was previously wired for aromatherapy lamps was plugged into electricity, lavender aromatherapy was given through a cup of aromatherapy lamps which contained warm water then poured with lavender aromatherapy.

The aromatherapy with a 1% concentration was given to the patient. If the smell had been smelled the patients was instructed to position themselves as comfortably as possible and inhale the aroma for 10 minutes, the distance between aromatherapy lamps is about 30 cm from the patient, the lamp is placed on the table beside the patient.

This Post-test stage was the last stage in the implementation phase of this research. At this posttest stage, the researcher

measured the pain scale of the respondent by using a numeric rating scale of 0-10. Respondents were asked to say what number they felt after 10 minutes of giving aromatherapy through inhalation.

3. Results and Discussion

This study used patients who gave birth to cesarean section surgery as respondents at RSUD Raja Ahmad Thabib Riau Islands Province which had fulfilled the exclusion criteria as many as 60 patients consisting of 30 patients in the lavender aromatherapy group and 30 patients in the control group.

Table 2: Analysis of the Effect of Lavender Aromatherapy on Pain Intensity in Postpartum Caesarean Patients

Treatment	Pain intensity		
	Mean	Range	p value
Before	6,0000	4,00-9,00	0,000
After	3,7000	3,00-6,00	

Table 3: Analysis of the effect of the influence on the pain intensity of postpartum patients in the control group

Treatment	Pain Intensity		
	Mean	Range	p value
Before	6,7000	6,00-9,00	0,29
After	6,2333	5,00-7,00	

Table 4: Comparative Test Analysis of Aromatherapy in the Treatment and Control Groups

Pain		Pre		Post		p value
		N	%	N	%	
Treatment	Mild			16	53.3	0,000
	Medium	22	73,33	14	46,6	
	Weight	8	26,6			
Control	Medium	20	80	18	60	
	Weight	10	20	12	40	
		60	100	60	100	

The table 4 the Mann-Whitney test was used in this research. The test used to determine the difference in lavender aromatherapy treatment. Mann-Whitney test obtained the p-value of 0.000 ($p > 0.005$), so that it can be interpreted that there is a difference in the decrease in pain intensity in patients post-caesarean sectio. Patients gave lavender aromatherapy at a concentration of 1% and in the control group which was only given oil with aroma lavender. This shows that lavender aromatherapy can reduce pain intensity in post-caesarean sectio patients.

The Effect Lavender Aromatherapy on Pain Intensity of Patient Post-Caesarean sectio.

The table 2 obtained p-value 0,000 $< 0,05$ so that (H_0 is rejected), it can be interpreted that treatment group using lavender aromatherapy with 1% concentration there was a significant difference in the reduction pain intensity between before and after lavender aromatherapy was given by inhalation.

This research Widayani (2016) entitled lavender aromatherapy can reduce the intensity of perineal pain in postpartum mothers. The pain had decreased after inhalation of lavender aromatherapy. It happened because the aroma of

essential oils will wet the mucous membranes of the nose, pharynx, larynx, trachea, bronchi, bronchi and alveoli. The essential oils can also affect a person's psychic condition through stimuli received by olfactory nerve endings that contained in the lining of the nasal linder or the area of the nerve response in other organs through the essential oil passes.

In line with Widayani's research, Dwiyaniti et al (2014) in their researching the effect of inhaled lavender aromatherapy on pain intensity after cesarean section with a sample of 32 people, the results showed that before the inhalation of lavender aromatherapy on average pain intensity on a scale of 5.44 (in the range of 2-9), after giving inhalation of lavender aromatherapy the pain intensity decreased, which was the mean scale of 4.31 (range 1-7). Thus, there are differences in postpartum cesarean pain intensity after lavender aromatherapy.

The Effect of Pain Intensity of Postpartum Patients in the Control Group

The pain quality each individual had varies, some say pain like being pierced, there was a throbbing and others. Based on the results (table 3) of the study in the control group, it was found that in the control group using lavender-scented oil there was no significant difference in pain intensity reduction between before and after therapy (p-value $0.29 > 0.05$). This happens because the respondent was accustomed to dealing with pain so that the respondent was better prepared and easily anticipates pain.

The pain control group that was felt before lavender aromatherapy was given between 6-9, while after giving lavender pain aromatherapy was felt between 5-7. This returned to the subjectivity and perception of the respondent to pain, that only the client understood and understood pain best. felt. In addition, there are several factors that can affect the perception and reaction of each individual to pain. Factors that can influence are age, gender, attention, anxiety (anxiety), and fatigue [12].

Age greatly affects pain tolerance. In addition, female sex is considered more often to complain of the pain than men, which is influenced by cultural factors. While increased attention and anxiety also increase the perception of pain. Fatigue or fatigue that a person feels will also increase the sensation of pain and reduce individual coping [12]-[13]. Thus, this study concludes that even though lavender aromatherapy has been given in the control group, there is no significant difference in pain intensity reduction between before and after therapy.

Differences in the effect of aromatherapy on treatment groups and control groups of post-cesarean sectio patients

The results of the study p-value of 0.000 ($p > 0.005$), so that it can be interpreted that there was a difference in the decrease pain intensity inpatients post-caesarean sectio whis was given lavender aromatherapy with 1% concentration and the control group who were only given oil with the aroma of lavender. This showed that lavender aromatherapy

could reduce pain intensity inpatients post-cesarean sectio.

This research accordance with the theory which states that aromatherapy can help reduce the intensity of post-cesarean sectio pain. Aromatherapy lavender plays a role in reducing pain and had the effect of soothing psychology. The research that supported the results of this study was the study of Dwijayanti et al (2013) which states that lavender aromatherapy can reduce pain intensity of cesarean sectio post patients by 1.13. In addition, research conducted by Widayani (2016) in patients with postpartum perineal pain received a decrease in the intensity of perineal suture pain before and after lavender aromatherapy. Thus lavender aromatherapy can be an alternative treatment for post-cesarean section pain that can lead to better physical and psychological conditions of the mother.

4. Conclusion

- a) Pain intensity before being given lavender aromatherapy in the treatment group on average 6,0000 (moderate pain) and after being given an average of 3,7000 (mild pain) with value = 0,000
- b) Pain intensity before being given lavender scented oil in the control group an average of 6.7000 (moderate pain) and after being given an average of 6.2333 (moderate pain) with p-value = 0.029
- c) There were significant differences between the treatment groups given lavender aromatherapy with the control group given the placebo, based on the results of the Mann Whitney test with p-value 0.000

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