



Implementation of Lavender Aromatherapy Inhalation to Reduce Pain Intensity in Post Sectio Caesarea Patients

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Submitted: August 2024

Revised: September 2024

Published: 30 September 2024

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ABSTRACT

Introduction: The standard operating for sectio caesarea according to WHO increases by around 5-15% per 1000 births in the world. One of the effects experienced by post-sectio caesarea mothers is pain. The form of pain experienced by postoperative patients is acute pain. **Objective:** This study was conducted to present implementation of lavender aromatherapy inhalation to reduce pain intensity in post sectio caesarea patients. **Method:** The method used in this case study is descriptive analytic with a nursing care approach by collecting data starting from assessment, formulating diagnosis, planning, implementing actions and conducting comprehensive evaluations. Subjects in this study amounted to a person, namely post sectio caesarea clients who experienced pain problems. The client was treated in Teratai 2 Room, BLUD Banjar Hospital. The type of intervention given was lavender aromatherapy inhalation for three days starting from May 31-June 2 2023 and the intensity of pain felt by the client was measured by Numeric Rating Scales. **Result:** After carrying out nursing assessment through a physical examination, the result showed that the client looked grimacing, there was a section caesarea incision in the abdomen with a size of 11 centimeter. This raises a nursing problem namely acute pain associated with physical injury agents and the interventions carried out is pain management with inhalation of lavender aromatherapy. After the intervention for three days with a duration of 30 minutes there was a decrease in the perceived pain scale from eight to three (0-10). **Conclusion:** Lavender aromatherapy inhalation intervention is effective in reducing pain intensity in post sectio caesarea patients as evidenced by the decrease in pain scale from eight to three (0-10). Beside that, researcher did not find discrepancies between facts and theories so that this research is not contradictory to research that has been done by previous researchers.

Keywords: lavender aromatherapy, pain intensity, sectio caesarea

Introduction

Sectio caesarea delivery is a delivery of the fetus where it is born through an incision in the wall of the abdominal and uterine with the uterine nerves intact and weighing over 500 grams (Aprina & Puri, 2016). The indications for sectio caesarea are premature rupture membranes, cephalopelvic disproportion, fetal distress, hypertension, breech location, seizures, bleeding and many others (Rezeki & Sari, 2018).

The standard operating for sectio caesarea according to WHO increases by around 5-15% per 1000 births in the world. (Hapsari & Hendraningsih, 2018). WHO data in the Global Survey on Maternal and Perinatal Health in 2011 showed 46.1% of all births were through sectio caesarea (Marlina, 2016). Based on RISKESDAS data for 2018, the number of deliveries using the sectio caesarea (SC) method in Indonesia was 17.6% (Putra, Wandia, & Harkitasari, 2021). Indications for delivery by sectio caesarea (SC) are caused by several complications with a percentage of 23.2% including premature rupture of membranes (5.6%), prolonged labor (4.3%), transverse/ breech fetal position (3.1%), amniotic fluid premature rupture of transverse/ breech fetus (3.1%), cord entanglement center (2.9%), hypertension (2.7%), bleeding (2.4%), retained placenta (0.8%), seizures (0.2%), placenta previa (0.7%), and others (4.6%) (Hayati, Pujiati, & Sumanti, 2023).

One of the effects experienced by post-sectio caesarea mothers is pain. The form of pain experienced by postoperative patients is acute pain (WAHYU, 2018). Pain is a problem that must be addressed, because it can cause discomfort. The impact of pain in post SC patients will result in limited mobilization of the mother, impaired daily activity needs or Activity of Daily Living (ADL), bonding attachment and early initiation of breastfeeding (IMD) not being met (Siti Safaah, Iwan Purnawan, 2019). Therefore pain management during post SC especially on the first day is very necessary. The purpose of postoperative pain management is to relieve the patient's pain and discomfort with the minimal side effects (Dwienda Ristica & Irianti, 2023).

The are two treatment, pharmacological and non-pharmacological that can be used to reduce post-sectio caesarea pain (Anwar, Astuti, & Bangsawan, 2018). Pharmacological treatment that is commonly used to reduce pain is by giving the analgesic ketorolac injection and suppositories (Antari, Nafisah, & Sulistyaningsih, 2022). Meanwhile, non-pharmacological treatment that can be used is inhalation aromatherapy (Maryani & Himalaya, 2020). One of the inhalation aromatherapy that can be used is lavender aromatherapy (Tirtawati, Purwandari, & Yusuf, 2020).

Lavender aromatherapy inhalation is a pain relief therapy using lavender essential oil which is put into a diffuser and turns into a fragrant vapor that spreads in the air (Widiani & Karmiani, 2020). The active substance contained in lavender aromatherapy will stimulate the hypothalamus to produce and release endorphins, this process occurs when the aromatherapy is inhaled (Widayani, 2017). Endorphins are substances that cause a feeling of calm, relaxed, and happy, endorphins are known as hormones of happiness and have an analgesic effect (Taqiyah, Alam, Leisubun, & Jama, 2023).

Based on the phenomena from the background above, the researchers felt interested in intervening lavender aromatherapy to reduce pain intensity in post-sectio caesarea patients in Teratai 2 Room, BLUD Banjar Hospital.

Objective

This study was conducted to present lavender aromatherapy inhalation implementation to reduce pain intensity in post- sectio caesarea patients.

Method

The method used in this case study is descriptive analytic with a nursing care approach by collecting data starting from assessment, formulating diagnoses, planning, implementing actions and conducting comprehensive evaluations. Subjects in this study amounted to 1 person, namely post sectio caesarea clients who experienced pain problems. The client was treated in the Teratai 2 room at BLUD Banjar City Hospital in a conscious state and was willing to be a respondent. The type of intervention given was lavender aromatherapy inhalation for 3 days starting from May 31-June 2 2023 and the intensity of pain felt by the client was measured by Numeric Rating Scales.

Data collection techniques used were observation, physical examination, interviews, as well as documentation. Results are written in the form of field notes, then copied in the form of transcripts or structured notes. Presentation of data is done with tables, pictures, charts and narrative text.

Result

Nursing Assessment

The client is Mrs. R with female sex, 29 years old, having address in Sukasari Hamlet, Sukajadi Village, RT 14 RW 04, Pamarican District, Ciamis Regency. During the assessment in the Teratai 2 Room on May 31, 2023 at 09.28 WIB, the client said pain in the first day post-sectio caesarea postoperative wound in the lower abdomen. The pain is felt like irises, the pain increases when the client moves a lot and decreases slightly when resting, the pain scale is 8 from the range 0-10 and the pain that is felt comes and goes.

The results of measuring vital signs showed blood pressure 130/90 mmHg, respiration 25 beats/minute, pulse 98 beats/minute and temperature 37.6°C. the results of the physical examination obtained the quality of the Glasgow Coma Scale (GCS) compos mentis client with the quantity of Eye 4, Motor 6, and Verbal 5. The physical examination focused on the reproductive system and integumentary system. In the reproductive system, normal vaginal bleeding results were obtained with red-black lochia rubra. On the integumentary system, the results showed that there was an incision wound in the lower abdomen, TFU 3 fingers below the center and there was tenderness in the incision.

Nursing Diagnosis

Table 1. Data Analysis

Symptom	Etiology	Problem
Subjective Data: a. The client complains of pain in the lower abdomen after a post sectio caesarea scar. b. Pain that feels like being sliced. c. The pain she feel increases when you move. d. The pain she feel goes away. e. Perceived pain scale 8 (0-10) f. Clients also complain of difficulty sleeping because the pain is very disturbing.	Sectio caesarea ↓ Section caesarea wound ↓ Disconnected tissues ↓ Tissue trauma ↓ Release of the histamin and prostaglandin ↓ Stimulate sensory area ↓ Acute pain	Acute pain

Objective Data:

- a. Blood pressure: 130/90 mmHg
 - b. Pulse: 98x/ minute
 - c. Respiration: 25x/ minute
 - d. Temperature: 37,6 °Celcius
 - e. The client looks grimacing when moving.
 - f. There was a post sectio caesarea wound on the abdomen with a size of 11 cm.
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The result of the assessment, it can be concluded that the nursing problems is acute pain associated with physical injury agents with diagnosis number (D.0077) page 172 in the Indonesian Nursing Diagnostics Standard book DPP PPNI Issue 1 2018.

Nursing Intervention**Table 2. Nursing Intervention**

Nursing Diagnosis (Objective, Yield Criteria)	Intervention
Acute pain related to physical injurious agent. Objective: After nursing actions, the problem of acute pain is resolved with Yield Criteria: 1. Complaints of pain decreased (5) 2. The grimace descends (5) 3. Decreased sleep difficulty (5) 4. Anxiety decreases (5)	<ul style="list-style-type: none">1. Identify the location, characteristics, frequency, intensity of pain.2. Identify the pain scale.3. Identify non-verbal pain responses.4. Identify factors that exacerbate and relieve pain5. Provide non-pharmacological techniques to reduce pain with lavender aromatherapy.6. Environmental control that exacerbate pain (temperature, lighting, noise).7. Facilitate rest and sleep.8. Suggest self-monitoring of pain.

Nursing Implementation

Implementation of nursing given in accordance with nursing interventions that have been designed according to client needs. The implementation includes identifying the location, characteristics, frequency, intensity of pain, identifying pain scales, identifying non-verbal pain responses, identifying factors that aggravate and relieve pain, provide non-pharmacological techniques to reduce pain with lavender aromatherapy, control environments that aggravate pain (temperature , lighting, noise), facilitate rest and sleep and encourage self-monitoring of pain.

Nursing Evaluation**Table 3. Nursing Evaluation**

Nursing Diagnosis	Nursing Evaluation		
	31 Mei 2023	01 June 2023	02 June 2023
Acute pain related to physical injurious agent.	S: 1. The client says he still feels pain in the surgical scar. a. The client complains of pain	S: 1. The client says it still hurts. 2. Pain scale 7	S: 1. The client says the pain has decreased. 2. Pain scale 5
Subjective Data:			

	in the lower abdomen after a post sectio caesarea scar.	3. The pain increases when he move a lot.	3. The pain increases when you move a lot.	O: 1. The client does not appear to wince. 2. There is a post sectio caesarea wound in the abdomen. 3. BP: 120/80 mmHg 4. P: 92x/ minute 5. R :21x/ minute 6. T:36,7°C
b.	Pain that feels like being sliced.	1. The client looks grimacing.	1. The client still looks grimacing.	
c.	The pain you feel increases when you move.	2. There is a post sectio caesarea wound in the abdomen.	2. There is a post sectio caesarea wound in the abdomen.	3. BP: 120/80 mmHg 4. P: 90x/ minute 5. R: 23x/ minute 6. T:36,8°C
d.	The pain you feel goes away.	3. BP: 130/90 mmHg	3. BP: 130/80 mmHg	A: Acute pain partially resolved.
e.	Perceived pain scale 8 (0-10)	4. P: 98x/ minute 5. R: 25x/ minute	4. P: 90x/ minute 5. R: 23x/ minute	
f.	Clients also complain of difficulty sleeping because the pain is very disturbing.	6. T: 37,6°C	6. T:36,8°C	P: Continue intervention
Objective Data:		P: Continue intervention	P: Continue intervention	I: 1. Identify the location, characteristics, frequency, intensity of pain. Result: The client complains of pain in the postoperative wound in the abdomen, pain like being sliced and the pain increases when the client moves a lot.
a.	Blood pressure: 130/90 mmHg	I:	I:	
b.	Pulse: 98x/ minute	1. Identify the location, characteristics, frequency, intensity of pain.	1. Identify the location, characteristics, frequency, intensity of pain.	
c.	Respiration: 25x/ minute			Result: The client complains of pain in the postoperative wound in the abdomen, pain like being sliced and the pain increases when the client moves a lot.
d.	Temperature: 37,6 °Celcius			
e.	The client looks grimacing when moving.	Result: The client complains of pain in the postoperative wound in the abdomen, pain like being sliced and the pain increases when the client moves a lot.	Result: The client complains of pain in the postoperative wound in the abdomen, pain like being sliced and the pain increases when the client moves a lot.	Result: The client complains of pain in the postoperative wound in the abdomen, pain like being sliced and the pain increases when the client moves a lot.
f.	There was a post sectio caesarea wound on the abdomen with a size of 11 cm.			
2. Identify the pain scale Result: pain scale 7 (0-10)		2. Identify the pain scale Result: pain scale 5 (0-10)	2. Identify the pain scale Result: pain scale 3 (0-10)	2. Identify the pain scale Result: skala nyeri 3 (0-10)
3. Identify non-verbal pain responses Result: The client grimaces when moving.		3. Identify non-verbal pain responses Result: the client seems to have grimaced too	3. Identify non-verbal pain responses Result: the client seemed relaxed when given lavender	5. Provide non-pharmacological techniques to reduce pain with lavender aromatherapy. Result: The client seemed relaxed when given lavender

4. Identify factors that exacerbate and relieve pain. Result: the client says the pain increases when she moves a lot and decreases slightly when she rests.	often moving.	when	aromatherapy intervention.
5. Provide non-pharmacological techniques to reduce pain with lavender aromatherapy. Result: The client seemed relaxed when given lavender aromatherapy intervention.	5. Provide non-pharmacological techniques to reduce pain with lavender aromatherapy. Result: The client seemed relaxed when given lavender aromatherapy intervention.	8. Encourage self-monitoring of pain at home. Result: the client understands what is explained.	E: Problem partially resolved R: Continue the intervention independently at home.
8. Encourage self-monitoring of pain Result: the client understands what is explained.	8. Encourage self-monitoring of pain Result: the client understands what is explained.	E: Acute pain problem partially resolved. R: Continue intervention 1, 2, 5, 8	E: Acute pain problem not resolved. R: Continue intervention 1, 2, 3, 5, 8

Discussion

Nursing Care of Mrs. R in the Teratai 2 Room at BLUD Banjar City Hospital has been accomplished by researchers in a comprehensive manner based on theories found from many kinds of sources. The procedures of nursing care accomplished starting from the stage of assessment, formulation of diagnoses, planning, implementation and evaluation.

The results of the assessment showed that the client experienced acute pain problems. This is supported by the subjective data of the client complaining of pain in the lower abdomen, post sectio caesarea scars, pain that is felt like being sliced, pain that is felt increases when moving, feels intermittent and a pain scale that is felt is 8 (0-10) measured by Numerical Rating Scales (NRS). In addition, there is also objective data, namely the client looks grimacing, there is a post sectio caesarea incision in the abdomen with a size of 11 cm.

The client's acknowledgment of his condition and the objective data found are one of the considerations in determining a nursing diagnosis. Accordingly, the diagnosis founded is acute pain related to physical injury agents with the number of diagnosis (D.0077) page 172 in the Indonesian Nursing Diagnostics Standard book DPP PPNI Edition 1 2018. For addressing

these nursing problems the researchers intervened and implemented according to the book Indonesian Nursing Intervention Standards DPP PPNI Edition 1 2018 number I.08066 page 201 including identifying locations, characteristics, frequency, pain intensity, identifying scales of the pain, identifying non-verbal pain responses, identifying factors that aggravating and alleviating pain, providing non-pharmacological techniques to reduce pain with lavender aromatherapy, controlling the environment that aggravates pain (temperature, lighting, noise), facilitating rest and sleep and recommending independent pain monitoring.

Based on the implementation carried out for 3 days, there was significant progress. On day 1, the pain scale felt by 8 (0-10) clients looked grimacing, restless and reluctant to move at all because of the pain they were experiencing, but after being given lavender aromatherapy intervention the client looked a little more relaxed, grimaced a little less and the pain scale was reduced to 7 (0-10).

On the 2nd day the changes were very visible to the client, the scale of pain was reduced from 7 to 5 (0-10). The client no longer feels anxious, looks relaxed and is no longer afraid to move. In addition, the client also said that the pain he felt was not too disturbing to the client's sleep so that the client's sleep time increased as usual. On the 3rd day the client's pain gradually decreased to scale 3 and the client seemed relaxed, did not appear to grimace and the client was able to move freely.

The results of the nursing evaluation show a significant change in the scale of pain that the client feels, this is according to research done by Ana Mariza, Desfia Haryati HS that there is a significant effect of giving lavender aromatherapy to reducing pain in post section caesarea mothers. The research was conducted on 30 respondents with the Wilcoxon test results showing a p value of 0.000 ($p < 0.05$) so that lavender aromatherapy was declared significant for reducing pain in post section caesarea mothers (Mariza & Haryati HS, 2018).

Conclusion

Lavender aromatherapy inhalation intervention is effective in reducing pain intensity in post sectio caesarea patients as proved by the decrease in pain scale from 8 to 3 (0-10). Beside that, researcher did not find discrepancies between facts and theories so that this research is not contradictory to research that has been done by previous researchers.

Acknowledgement

Researchers would like to thank the supervisor of Maternity Nursing D3 Nursing STIKes Muhammadiyah Ciamis and Clinical Instructor (CI) BLUD Banjar City Hospital for facilitating and giving directions to researchers to conduct research. Thanks also go to clients and their families who have facilitated carrying out a case study entitled "Implementation of Inhalation Lavender Aromatherapy to Reduce Pain Intensity in Post Sectio Caesarea Patients".

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