

## Nursing Implementation of Acute Pain Management in Post Mastectomy Surgery Patients

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### ABSTRACT

**Background:** Surgery is a potential or actual threat to a person's integrity, both biopsychosocial and spiritual. One of the treatments for breast cancer is surgery, either tumor removal or mastectomy. The problem that often arises in postoperative patients is pain, which can affect the patient's overall condition.

**Purpose:** The purpose of this study was to determine the effect of pain management with deep breath relaxation therapy on the post operative mammae pain scale.

**Methods:** This case study design uses a descriptive method. The sampling method used was purposive sampling with 2 respondents, namely post-mastectomy patients in the Surgical Room of Muhammadiyah Hospital Palembang, in March 2022. The case study data were taken using interviews, observations and physical examinations carried out descriptively and presented in a narrative manner

**Results:** After implementing acute post-mastectomy pain management with deep breathing relaxation therapy in both case study subjects for 3 days there was a 3 point reduction in pain scale, in patient 1 from pain scale 6 to pain scale 3, in patient 2 from pain scale 5 to a pain scale of 2, and both case study subjects were able to move and fulfill basic needs independently.

**Conclusion:** Acute pain management with deep breathing relaxation therapy can reduce pain scale and help patients move quickly.

**Keywords:** acute pain management, breast cancer, deep breathing relaxation, mastectomy

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**BACKGROUND**

The Global Cancer Observatory, 2020 released that breast cancer in Indonesia is among the most common cancers found in women with a proportion of 30.8% of the total other cancer cases (Pangribowo, 2019). Data obtained from the World Health Organization (WHO) estimates that 18.1 million new cases *Ca Mammae* occurred in 2018. Of that number, 9.6 million people died. According to data (Kemenkes RI, 2018) in South Sumatra province related to breast cancer, cervical cancer and prostate cancer in South Sumatra, almost 4 thousand patients were recorded, while patients registered with the Cancer Information and Support Center Association (CISC) only approached 300. .

Treatment of cancer depends on the type and stage at the time of diagnosis. Surgery is one of the most widely used cancer treatment methods. Surgery is a potential or actual threat to a person's integrity, both biopsychosocial and spiritual. One of the surgeries for breast cancer is a mastectomy. The problem that often arises in postoperative patients is pain, which can affect the patient's overall condition (Awaludin et al., 2016).

Management to overcome pain problems in postoperative patients is pharmacologically through collaboration with the medical team and independent nursing actions with non-pharmacological techniques. Pharmacological techniques by giving pain relievers (analgesic) especially for very severe pain, which lasts for hours or days. The most common method used to treat pain is the administration of analgesics, but analgesics cannot be used continuously (Syahputra, 2017). Efforts made to reduce and reduce pain are non-pharmacological approaches. One of the most widely used pain control methods is relaxation. Principle This breathing exercise can reduce pain by reducing the sensation of pain and controlling the intensity of the reaction to pain. Relaxation can be done by creating a calm environment, a comfortable position and releasing tension. (Smeltzer, 2001).

The principle underlying pain reduction by deep breathing relaxation techniques lies in the physiology of the autonomic nervous system which is part of the peripheral nervous system that maintains homeostasis of the individual's internal environment. At the time of the release of chemical mediators such as bradykinin, prostaglandins, and substances will stimulate the sympathetic nerves, causing vasoconstriction which ultimately increases muscle tone which causes various effects such as muscle spasm which ultimately compresses blood vessels, reduces blood flow and increases the speed of muscle metabolism which causes impulse delivery. pain from the spinal cord to the brain and is perceived as pain (Smeltzer & Bare, 2012). This is because deep breathing relaxation techniques can stimulate the body to release endogenous opioids, namely endorphins and enkafalin. Endorphin hormone is a morphine-like substance that functions as an inhibitor of the transmission of pain impulses to the brain. So that when pain neurons send signals to the brain, synapses occur between peripheral neurons and neurons that go to the brain where substance should generate impulses. At that time, endorphins will block the release of substance p from sensory neurons, so that the sensation of pain is reduced (Aini & Reskita, 2017).

Relaxation techniques can reduce pain by relaxing muscle tension that supports pain. Deep breathing relaxation techniques aim to help express feelings, assist physical rehabilitation, have a positive influence on mood and emotional conditions, improve memory, and provide unique opportunities to interact and build emotional closeness (Ayudianningsih & Maliya, 2015). Deep breathing relaxation is useful for increasing alveolar ventilation, maintaining gas exchange, increasing cough efficiency, reducing physical and emotional stress, which can reduce pain intensity and reduce anxiety (Smeltzer & Bare, 2002). Based on research by Haskas & Ilyas, 2017 that relaxation techniques are effective in reducing post-op pain.

mammae. Based on the above background, the authors are interested in conducting research on the implementation of acute pain management nursing in post-mastectomy patients at Muhammadiyah Hospital Palembang in 2022.

## **OBJECTIVE**

The purpose of this case study is to provide an overview of the effect of acute pain management in the form of deep breathing relaxation in post-mastectomy patients with acute pain problems.

## **METHODS**

The case study method used is descriptive. This case study was conducted in the Ibnu Rusyid Operating Room, Muhammadiyah Hospital Palembang and was carried out in March 2022. The instrument or data collection tool in this case study used the basic nursing care assessment format. Data obtained from primary in the form of observation and physical examination with an approach of inspection, palpation, percussion and auscultation are also equipped with interviews with patients, families and nurses. Meanwhile, secondary data was obtained by studying documentation from patient daily progress notes, patient checklists and medical records at Muhammadiyah Hospital.

Research ethics permit has been obtained from the Health Research Ethics Commission of the Health Polytechnic of the Health Ministry of Palembang with the number: 0176 // KEPK // Adm2 // II // 2022. This case study was conducted on 09 March 2022 - 01 April 2022. The subjects studied were 2 patients with the same cases and nursing problems, namely post-mastectomy patients with acute pain problems. Subject inclusion criteria were after >12 hours - 24 hours postoperatively, first time surgery patients, female Ca mammae patients, patients with moderate pain scale.

## **RESULTS**

Based on the results of the case study, it is known that from the assessment about 17 hours postoperatively, the patient Ms. M, 49 years old, complained of pain in the right breast in the area of the surgical wound, pain that felt intermittent and prickling, pain scale 6, the patient grimaced, blood pressure 140/90 mmHg and pulse 92x/min. Assessment of 18 hours postoperatively on the 2nd patient, Mrs. Y, 48 years old, complained of pain in the left breast in the area of the surgical wound, intermittent pain such as prickling, pain scale of five, blood pressure 120/70 mmHg and pulse 84x/min.

The nursing diagnoses established in both patients based on the assessment are: is acute pain associated with a physical injury agent (the presence of a surgical incision) characterized by intermittent pain at the surgical site. Implementation actions in post-mastectomy patients who experience acute pain include identifying the location, characteristics, duration, frequency, quality, and intensity of pain using a pain scale using PQRST. Then provide health education about pain using leaflets and teach patients to take non-pharmacological actions in the form of deep breathing relaxation and review the administration of analgesics.

After nursing actions were carried out with deep breath relaxation, both patients said they felt more relaxed, calmed, and the pain decreased slowly. After three days of nursing care for both patients, it is known that the pain has decreased, the patient is not grimacing, not restless, and the pain scale is down and can already perform pain management techniques in the form of deep breathing relaxation. In this study the pain scale in both patients has decreased. Patient 1 on the first day is 6, then the second day is 4 and the third day is 3, while patient two on the first day has a pain scale of 5, on the second and third day and on the third day 2.

## **DISCUSSION**

The results of the assessment can identify nursing problems in the two post-mastectomy case study subjects with acute pain problems. Implementation based on SIKI, SOP is acute pain management with non-pharmacology in the form of deep breath relaxation. Nursing care has been carried out on both subjects for 3 days. The results of the assessment of acute pain management abilities in the two case study subjects showed that both of them experienced acute pain. This is shown by both grimacing, restless, and complaining of pain in the surgical wound when lying to the right and to the left.

Based on the theory and related research, the researcher assumes that pain in the surgical wound is caused by the disruption of tissue continuity so that it sends impulses to the hypothalamus. The pain felt before the deep breathing relaxation technique that often appears is on average on a moderate scale because the wound in the surgical area experienced is quite complex. With the characteristics of the respondent grimacing, nervous, able to describe the pain and indicate the location of the pain and can follow orders with good.

After the two case study subjects underwent mastectomy, the researchers provided prior education about pain and strategies to relieve pain. The aim is to increase the knowledge and awareness of the two case study subjects to improve their own health. The implementation of education about pain and strategies to relieve pain is carried out using media in the form of leaflets. In providing education about pain, the researcher explained using language that was easily understood by the patient. After being educated about pain and pain relief strategies for the two case study subjects, the researchers found that both subjects understood and their insights increased, marked by both being able to explain the meaning, goals, benefits, and disadvantages of not doing acute pain management in the form of deep breathing relaxation.

After providing education about pain and pain relief strategies, the researchers trained and accompanied the two case study subjects to do deep breathing relaxation. Deep breathing relaxation techniques were trained and accompanied by researchers in >12 hours - the first 24 hours post-mastectomy surgery. While being trained and accompanied by deep breathing relaxation, the two case study subjects were very cooperative. They are willing to follow the direction of the researcher and are able to do it well.

The principle underlying pain reduction by deep breathing relaxation techniques lies in the physiology of the autonomic nervous system which is part of the peripheral nervous system that maintains homeostasis of the individual's internal environment. At the time of the release of chemical mediators such as bradykinin, prostaglandins, and substances will stimulate the sympathetic nerves, causing vasoconstriction which ultimately increases muscle tone which causes various effects such as muscle spasm which ultimately compresses blood vessels, reduces blood flow and increases the speed of muscle metabolism which causes impulse delivery. pain from the spinal cord to the brain and is perceived as pain (Smeltzer & Bare, 2002)

The results of the study (Agung et al., 2013) stated that the deep breathing relaxation technique could be done by all respondents. The results showed that there was a significant effect of deep breathing relaxation techniques on reducing pain in postoperative general anesthesia patients at the Dr. Regional General Hospital. Moewardi Surakarta. Besides being able to reduce pain intensity, deep breathing techniques can also increase pulmonary ventilation and increase blood oxygenation, the purpose of deep breathing relaxation techniques is to increase alveolar ventilation, maintain gas exchange, prevent lung atelectasis, increase cough efficiency, reduce stress both physical and emotional stress, namely reducing pain intensity and reduce anxiety (Amita et al., 2018).

According to the authors, the measurements before and after the deep breathing relaxation technique decreased. The level of moderate pain became mild, the level of pain was moderate with the attitude of the respondent grimacing, being able to indicate the location of the pain, being able to describe it, and being able to follow orders well, while the intensity mild pain after the two case study subjects were trained and accompanied by doing deep breathing relaxation objectively, both of them felt more relaxed and calm than before.

## CONCLUSION

After the authors carried out nursing implementation on the two case study subjects, namely post-mastectomy patients with acute pain problems at the Palembang Muhammadiyah Hospital in 2022, which was held on March 9, 2022 to April 1, 2022, the researchers concluded that the implementation of acute pain management nursing in Post-operative mastectomy patients have been carried out according to the acute pain management intervention in the form of deep breathing relaxation carried out on 2 case study subjects. The two case study subjects were able to perform acute pain management procedures in the form of deep breathing relaxation > 12 hours - 24 hours post-mastectomy surgery well, so that at +48 hours to +72 hours post-mastectomy both of them were able to carry out activities independently. During pain management in the form of deep breathing relaxation in the two case study subjects both followed well, so that at + 48 hours to + 72 hours post-mastectomy the pain scale of the two subjects changed to a mild pain scale which was initially subject to 1 moderate pain scale, namely with scale 6 changed to 3 and in subject 2 the moderate pain scale with a pain scale of 5 changed to 2.

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