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CASE REPORT

Nursing Care for Cervical Cancer Patients with Pain Problems Using a Combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic Murottal Therapy

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ABSTRACT

Introduction: *Cervical cancer is a leading cause of death among women and frequently causes chronic pain that affects patients' physical, psychological, and spiritual well-being, as well as their overall quality of life.* ***Objectives:*** *This case study aimed to analyze maternity nursing care for cervical cancer patients with chronic pain through the application of a combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy.* ***Methods:*** *A descriptive case study design using the nursing process approach was applied to two cervical cancer patients experiencing chronic pain over a three-day period; evaluation was conducted using the Numeric Rating Scale (NRS).* ***Results:*** *In the first patient, the pain scale decreased from 6 to 5 on the first day and remained at 5 through the third day. In the second patient, the pain scale decreased from 5 to 4 on the first day, from 4 to 3 on the second day, and remained at 3 on the third day; both patients appeared more relaxed and comfortable after the intervention.* ***Conclusions:*** *The combination of PMR, Guided Imagery, and Quranic murottal therapy was beneficial in reducing chronic pain in cervical cancer patients and may be used as a complementary therapy in nursing practice.*

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1. Introduction

Cervical cancer remains one of the public health problems that continues to be a major cause of morbidity and mortality among women, particularly in developing countries. The World Health Organization has reported that approximately 94% of cervical cancer deaths occur in low- and middle-income countries [1]. This high incidence is associated with low coverage of Human Papillomavirus (HPV) vaccination, delayed early detection, and limited access to health services. Nearly all cases of cervical cancer are associated with persistent infection with high-risk HPV, particularly types 16 and 18, which play a role in the transformation of normal cells into malignant cells.

According to data from the Global Cancer Observatory (GLOBOCAN) 2022, there were 662,301 new cases of cervical cancer and 348,874 deaths from the disease worldwide [2]. In Indonesia, cervical cancer remains one of the cancers with the highest incidence among women, with 36,964 new cases and 20,708 deaths [3]. In Makassar City, the 2024 Health Profile indicates that suspected cervical cancer cases continue to be identified through the visual inspection with acetic acid (VIA) screening program, indicating that this disease remains a health problem

requiring attention through sustained promotive, preventive, curative, and rehabilitative efforts [4,5].

Chronic pain is one of the nursing problems most frequently experienced by cervical cancer patients, particularly in advanced stages. Pain may arise from tumor infiltration, surrounding tissue compression, metastasis, and the side effects of therapy such as surgery, chemotherapy, and radiotherapy. This condition affects not only physical aspects but also sleep quality, functional ability, psychological condition, social relationships, and patients' quality of life. Therefore, pain management is one of the main focuses in providing comprehensive nursing care.

In addition to pharmacological therapy, non-pharmacological interventions are increasingly being developed as complementary therapies in pain management. Progressive Muscle Relaxation (PMR) can reduce muscle tension through a systematic process of contraction and relaxation, while Guided Imagery helps divert patients' attention from pain sensations by creating calming imagery. For Muslim patients, Quranic murottal therapy also provides a relaxation effect through a spiritual approach that can increase calmness, reduce anxiety, and help reduce pain perception. These three interventions have complementary mechanisms of action, which may produce a more optimal effect when applied simultaneously.

Various studies have reported the effectiveness of PMR, Guided Imagery, and Quranic murottal therapy separately in reducing pain intensity. However, studies combining these three interventions simultaneously in cervical cancer patients remain limited. Therefore, this case study was conducted to analyze maternity nursing care for cervical cancer patients with chronic pain problems through the application of a combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy as a complementary nursing intervention to improve patient comfort.

2. Methods

This study used a descriptive case study design with a nursing process approach. The case study was conducted on two patients with a medical diagnosis of cervical cancer who experienced the nursing problem of chronic pain and were undergoing treatment in the GSR Ward of Dr. Wahidin Sudirohusodo General Hospital, Makassar, from 15–17 June 2026. Case selection was carried out purposively, taking into account the suitability of patient characteristics with the study objectives, namely patients diagnosed with cervical cancer, experiencing chronic pain, able to follow the intervention provided, and willing to become research subjects.

Data were collected through interviews, observation, physical examination, medical record review, and nursing documentation. Pain assessment was conducted using the PQRST method and the Numeric Rating Scale (NRS) to assess the location, characteristics, duration, aggravating/relieving factors, and intensity of the patients' pain. Nursing interventions were provided in accordance with the Indonesian Nursing Intervention Standards (SIKI), with the innovative During the intervention, patients first listened to the Quranic murottal therapy while simultaneously performing Progressive Muscle Relaxation (PMR), followed by Guided Imagery. The three interventions were administered according to the developed Standard Operating Procedure (SOP) in a single session lasting approximately 30–35 minutes, once daily for three consecutive days. Throughout the study, patients continued to receive pharmacological therapy according to the physician's prescribed medical treatment; therefore, the combination of PMR, Guided Imagery, and Quranic murottal therapy was implemented as a complementary therapy rather than a replacement for pharmacological treatment. As this study employed a descriptive case-study design, it was not intended to distinguish the specific effects of the non-pharmacological intervention from those of pharmacological therapy. Instead, the study aimed to describe the implementation of the combined intervention in nursing practice and to illustrate changes in pain intensity following the intervention as part of nursing care delivered alongside standard medical treatment. Pharmacological therapy was administered according to the hospital's routine schedule without any modification for research purposes, whereas the non-

pharmacological intervention was provided after ensuring that the patients were in a stable condition and able to participate in the entire intervention. In addition, no specific time interval was established between analgesic administration and the implementation of the intervention; therefore, the timing of pharmacological therapy was not controlled as a study variable.

3. Case Ilustration

This study was conducted on two patients with a medical diagnosis of cervical cancer who experienced the nursing problem of chronic pain in the GSR Ward of Dr. Wahidin Sudirohusodo General Hospital, Makassar. Both patients received a combination intervention of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy for three consecutive days as a complementary therapy in addition to pharmacological therapy.

Table 1. Patient Characteristics

Characteristic	Mrs. Nu	Mrs. Ni
Age	45 years	48 years
Medical Diagnosis	Cervical cancer	Cervical cancer, stage IIB
Chief Complaint	Lower abdominal pain radiating to the lower back	Lower abdominal pain radiating to the lower back
Main Nursing Problem	Chronic pain	Chronic pain
Length of Intervention	3 days	3 days

Based on Table 1, both patients were female with a medical diagnosis of cervical cancer and the main nursing problem of chronic pain. The first patient was 45 years old with a complaint of lower abdominal pain radiating to the lower back, while the second patient was 48 years old with a diagnosis of stage IIB cervical cancer accompanied by a complaint of lower abdominal pain radiating to the lower back. Both patients underwent a combination intervention of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy for three consecutive days as part of their nursing care.

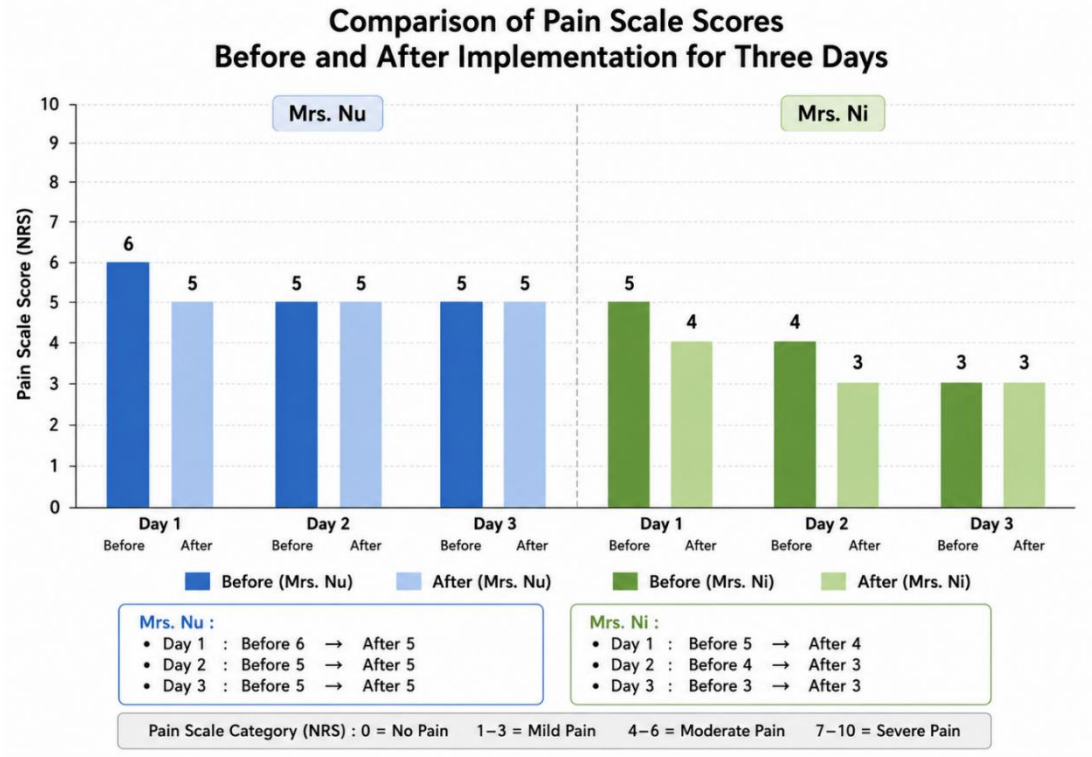

Figure 1. Changes in Pain Intensity Before and After Intervention

Based on Figure 1, measurements using the Numeric Rating Scale (NRS) showed changes in pain intensity in both patients after the intervention was given. In Mrs. Nu, the pain scale before the intervention on the first day was 6 (moderate pain) and decreased to 5 (moderate pain) after the intervention. On the second and third days, the pain scale before and after the intervention remained at 5, so no further change occurred during the last two days of observation.

In Mrs. Ni, the pain scale before the intervention on the first day was 5 (moderate pain) and decreased to 4 (moderate pain) after the intervention. On the second day, the pain scale again decreased from 4 to 3 (mild pain) after the intervention. On the third day, the pain scale before and after the intervention remained at 3, so no change in pain intensity was found on the last day of observation.

4. Discussion

The results of this study showed that the administration of a combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy for three consecutive days was able to reduce pain intensity in both cervical cancer patients. Based on measurements using the Numeric Rating Scale (NRS), Mrs. Nu experienced a decrease in the pain scale from 6 to 5 on the first day, which persisted until the third day, while Mrs. Ni experienced a gradual decrease from 5 to 3 during the intervention period. These results indicate that the combination of the three interventions can help reduce pain intensity in cervical cancer patients, although the magnitude of the decrease differed between patients. In this study, the three interventions were administered simultaneously as a single complementary intervention package; therefore, the study was not designed to compare the effectiveness of each intervention individually. The findings demonstrated a reduction in pain intensity in both patients following the combined implementation of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy, as evidenced by the gradual decrease in pain scores based on daily evaluations. Therefore, the observed reduction in pain intensity should be interpreted as the overall effect of the combined intervention rather than the effect of any single intervention.

These findings are consistent with previous studies showing that the combination of Progressive Muscle Relaxation (PMR) and Guided Imagery effectively reduces pain and anxiety in cancer patients by decreasing muscle tension and redirecting patients' attention from pain sensations toward calming mental imagery, thereby promoting physical and psychological relaxation [6].That study explained that PMR helps reduce muscle tension so that the body becomes more relaxed, while Guided Imagery diverts patients' attention from pain sensations toward calming imagery, thereby reducing the perception of pain. The combination of these two interventions produces physical and psychological relaxation effects that support the reduction of pain intensity.

In addition, Progressive Muscle Relaxation has been shown to reduce postoperative pain and fatigue while improving physiological conditions in patients with head and neck cancer [7]. PMR has also been reported to be effective in reducing pain and anxiety in patients with cervical cancer [8]. Furthermore, previous studies and a systematic review with meta-analysis demonstrated that PMR contributes to reducing pain, anxiety, and stress while improving the quality of life of cancer patients [9,10].

Furthermore, previous studies have demonstrated that the combination of Quranic murottal therapy using Surah Ar-Rahman and green-colored media reduced pain intensity in cervical cancer patients from moderate to mild levels. These studies also reported that patients appeared calmer, more relaxed, and experienced reduced pain responses following the intervention [11,12].

From a spiritual perspective, Quranic murottal therapy has also been reported to reduce pain levels in cancer patients by promoting relaxation, enhancing psychological comfort, and helping patients regulate their responses to pain. These findings suggest that murottal therapy

may serve as an effective complementary spiritual intervention in holistic nursing practice, particularly for Muslim patients [13].

The difference in response between Mrs. Nu and Mrs. Ni in this study indicates that the effectiveness of non-pharmacological therapy is influenced by each patient's clinical condition. Mrs. Nu experienced a one-point decrease in pain, while Mrs. Ni experienced a two-point decrease. This difference is likely influenced by physical condition, disease stage, accompanying complications, and the patient's ability to follow all stages of the intervention. The first patient experienced a smaller reduction in pain intensity than the second patient. This difference may be attributed to the distinct clinical characteristics of each patient. Mrs. Nu had a higher baseline pain score (NRS 6) and was diagnosed with bilateral pneumonia, which caused dyspnea and impaired her overall physical condition. These conditions may have limited her ability to achieve optimal relaxation during the combined intervention of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy. In contrast, Mrs. Ni had a lower baseline pain score (NRS 5) and, although diagnosed with stage IIB cervical adenocarcinoma, exhibited a relatively more stable clinical condition during the intervention period. These differences in clinical characteristics may have contributed to the greater reduction in pain intensity observed in Mrs. Ni compared with Mrs. Nu.

Nevertheless, both patients experienced a decrease in pain intensity after being given the combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy. These findings confirm that nursing care must be provided comprehensively, taking into account patients' biological, psychological, social, spiritual, and cultural needs. Nurses play a role not only in addressing physical problems but also in helping patients rebuild hope, providing emotional support, and facilitating spiritual needs according to patients' beliefs. Thus, the combination of Progressive Muscle Relaxation, Guided Imagery, and Quranic murottal therapy is not only effective as a non-pharmacological intervention in reducing chronic pain, but also constitutes a holistic nursing approach capable of increasing the motivation, hope, and quality of life of cervical cancer patients

5. Conclusion

Nursing care for cervical cancer patients with chronic pain problems has been implemented in accordance with the nursing process. The focus of the intervention in this case study was the management of chronic pain through a combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy as a complementary therapy.

The application of a combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy helped reduce pain intensity in both cervical cancer patients. In addition to reducing the pain scale, this intervention also increased patients' relaxation and comfort during treatment. The difference in response between the two patients indicates that the effectiveness of non-pharmacological therapy is influenced by the clinical condition and individual characteristics of each patient.

Nurses are encouraged to consider the combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy as a complementary therapy in pain management for cervical cancer patients. Healthcare institutions are expected to support the implementation of non pharmacological interventions based on evidence-based nursing practice through the development of standard operating procedures (SOPs) and training for nursing staff. Future research is encouraged to use a larger number of respondents, a longer intervention duration, and a stronger research design to test the effectiveness of the combination of Progressive Muscle Relaxation (PMR), Guided Imagery, and Quranic murottal therapy in cervical cancer patients.

Author's Contribution Statement : Zahrah Dhalilah Suruga; composed draft research, data collection data analysis , and compilation report research and articles For external . Nurhidayah; supervision and revision. Nurul Fadhilah Gani & Hasnah; Supervision

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