

Nursing Care for Mr. T with Diagnosis Lung Tumor in the Syafa Ward of the Dr. Zainoel Abidin, Aceh

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Abstract: Lung tumor is a type of malignancy that has a significant impact on the quality of life of patients, characterized by symptoms such as chronic cough, shortness of breath, chest pain, and sleep disturbances. Patients with lung tumors often experience physical and psychological disorders that require holistic nursing care. Comprehensive nursing care was provided to Mr. T, who was diagnosed with lung cancer in the Syafa Room of Dr. Zainoel Abidin Hospital, focusing on managing the main symptoms such as ineffective airway clearance, acute pain, and sleep disturbances. The nursing process approach was carried out starting from assessment, diagnosis, intervention, implementation, to evaluation. Interventions included chest physiotherapy techniques, oxygen administration, pain management, and the application of non-pharmacological therapy in the form of Al-Qur'an recitation to improve the patient's sleep quality. After 3x24 hours of intervention, there was an improvement in breathing patterns and airway clearance, a decrease in pain complaints, and an improvement in the patient's sleep quality. Al-Qur'an recitation therapy proved to be effective in reducing anxiety and increasing calmness. Comprehensive nursing care with a biopsychosocial-spiritual approach proved to be able to improve the comfort and quality of life of patients with lung tumors. Al-Qur'an recitation therapy can be a useful complementary strategy in the management of sleep disorders.

Keywords: Nursing Care, Lung Tumor, Sleep Pattern Disorder, Quran Recitation, Acute Pain

1. Background

Lung tumors are a serious disease that greatly impacts patients' quality of life. This disease can be benign or malignant, with lung cancer being the most common form of malignancy. Based on data from the Global Cancer Observatory (GCO) in 2020, lung cancer ranks third in global cancer incidence and is the leading cause of cancer deaths. In Indonesia, lung cancer is also among the top five types of cancer with high mortality rates, due to often late detection⁽¹⁾.

The main risk factors contributing to the development of lung tumors are smoking, exposure to environmental pollutants, recurrent lung infections, and genetic factors. Most patients diagnosed with lung tumors experience severe symptoms, such as chronic cough, shortness of breath, chest pain, and significant weight loss. These symptoms can interfere with patients' daily activities and cause significant psychological effects. Therefore, comprehensive nursing care is needed to help patients manage their symptoms and improve their quality of life⁽²⁾.

Mr. T is a patient admitted to Syafa Ward at Dr. Zainoel Abidin Hospital in Aceh with a diagnosis of lung tumor. Based on the examination results, the patient experienced hypersecretion of the respiratory tract, which caused difficulty breathing, worsening chest pain, and sleep disturbances due to anxiety and discomfort. This condition required appropriate nursing intervention so that the patient could feel more comfortable during his treatment at the hospital.

One of the main problems experienced by Mr. T is ineffective airway clearance due to hypersecretion of the respiratory tract. Excessive mucus production causes the patient to have difficulty breathing, which can worsen his condition. The role of nurses is very important in helping patients manage these symptoms, such as by performing chest physiotherapy, providing nebulization therapy, and teaching effective coughing techniques so that secretions can be removed more optimally.

In addition, acute pain is the main complaint experienced by Mr. T due to the pathological process occurring in his lungs. This pain can be dull or sharp, depending on the location and

severity of the tumor. If not managed properly, prolonged pain can cause stress, sleep disturbances, and a decreased appetite, which further worsens the patient's condition. Therefore, nurses need to implement pain management interventions, either through the administration of analgesics as recommended by the doctor or through non-pharmacological techniques such as relaxation and distraction techniques.

Sleep disturbances are also one of the nursing problems experienced by Mr. T. The patient has difficulty sleeping due to anxiety, pain, and the absence of a bed partner, which makes him feel lonely. To overcome this problem, Al-Qur'an murotal therapy is given as a non-pharmacological intervention aimed at creating a relaxing and calming effect for the patient. Research conducted by Nino, S. N., & Sutrisno, S. (2023). Nursing Care for Basic Pain Needs in Mrs. T with a Medical Diagnosis of Lung Cancer in the Srikandi Room of Wijaya Kusuma Hospital, Purwokerto. shows that Al-Qur'an murotal therapy can help reduce anxiety, improve sleep quality, and provide psychological calm for patients undergoing treatment at the hospital³.

The application of holistic nursing care is very important in treating patients with lung tumors. Nurses not only focus on managing physical symptoms, but also pay attention to the psychological and spiritual aspects of patients. A combination of pharmacological and non-pharmacological therapies, such as Al-Qur'an murotal therapy, can help improve patient comfort and quality of life during treatment.

With the right nursing approach, it is hoped that Mr. T's condition can be more stable, his symptoms can be reduced, and his quality of life can be improved. Through comprehensive nursing care, patients can experience maximum benefits from the care they receive, both physically, psychologically, and spiritually.

2. Method

The method used is a case study with a nursing process approach. The case study was conducted from April 23, 2024, to May 6, 2024.

3. Results and Discussion

a. Assessment

Lung cancer is a type of malignancy that occurs in the lungs. This condition can cause various symptoms and significant complications for the patient. In the case of Mr. T, aged 49, he was diagnosed with lung cancer that caused several health problems that needed to be treated comprehensively.

The main symptoms experienced by Mr. T include shortness of breath, coughing up blood, and pain in the right thoracic area. The patient's shortness of breath had lasted for about 2 months and was getting worse. This is in line with research conducted by Alfarisa S, Mitra E, Wahyuni S (2021), which states that shortness of breath is one of the symptoms commonly found in lung cancer patients⁴.

The bloody cough experienced by Mr. T is also a typical symptom of lung tumors. This condition can be caused by tumor growth invading the blood vessels around the lungs. This is in accordance with research by Purba AF, Wibisono BH, Rachmawati B (2024). Bloody cough is one of the symptoms that often appears in lung cancer patients and can be an indicator of the severity of the disease⁵.

The pain felt by Mr. T in the right thoracic area extending to the back indicates tumor pressure or invasion into the surrounding tissue. This leads to a nursing diagnosis of acute pain. Pain management is one of the important focuses in the care of lung tumor patients, as discussed in the study by Putri et al. (2023) entitled "The Effectiveness of Complementary Therapy in Pain Management in Lung Cancer Patients: A Systematic Review"⁶.

Ineffective airway clearance is another nursing diagnosis relevant to Mr. T's condition. This is indicated by shortness of breath, coughing up phlegm, increased respiratory rate, and additional breath sounds (rales and wheezing). Lung tumors can cause airway obstruction and increase secretion production. Research by Rahma et al. (2021) entitled

"The Effectiveness of Chest Physiotherapy on Airway Clearance in Lung Cancer Patients" shows the importance of nursing interventions in improving airway clearance in lung cancer patients⁽⁷⁾.

Mr. T's sleep pattern disorder was characterized by insufficient sleep duration (only 5-6 hours per day) and frequent waking at night due to coughing and chest pain. Poor sleep quality can have a negative impact on the patient's recovery process and quality of life. The study by Nugroho et al. (2022) entitled "The Relationship Between Sleep Quality and Quality of Life in Lung Cancer Patients Undergoing Chemotherapy" emphasizes the importance of managing sleep disorders in lung cancer patients⁽⁷⁾.

b. Diagnosis

1. Airway Clearance

The nursing diagnosis "ineffective airway clearance" is a condition in which the patient is unable to clear secretions or obstructions from the respiratory tract to maintain a clear airway. In this case, the diagnosis is based on subjective and objective data found in the patient. The main symptoms supporting this diagnosis include coughing up blood, difficulty expelling phlegm, shortness of breath, and additional breathing sounds such as wheezing and rales in both lung fields. Bronchoscopy results showing the presence of a lung tumor are also an important factor contributing to this condition.

A study entitled "The Effectiveness of Chest Physiotherapy and Effective Coughing on Sputum Clearance in Patients with Ineffective Airway Clearance" shows that a combination of chest physiotherapy and effective coughing can increase sputum clearance in patients with airway clearance problems. This study revealed that this intervention is effective in improving airway clearance in patients with various respiratory conditions, including patients with lung cancer⁽⁸⁾.

The hypersecretion of the airway found in these patients is a common manifestation of ineffective airway clearance. According to the study "Factors Affecting the Occurrence of Ineffective Airway Clearance in Patients with Respiratory System Disorders," mucus hypersecretion can be caused by various factors, including chronic inflammation, infection, and tumor growth. In patients with lung tumors, increased mucus production often occurs as a response to irritation caused by the tumor mass. This explains why patients experience coughing with difficult-to-expel phlegm and the presence of yellowish mucus.

2. Acute Pain Characterized by Physiological Injury Agents

The nursing diagnosis of "acute pain" in this patient is based on the presence of a physiological injury agent, which is most likely related to the previously diagnosed lung tumor. The subjective and objective data provided indicate that the patient is experiencing significant pain, especially in the right chest, which meets the criteria for the diagnosis of acute pain. Pain in lung cancer patients is often multifactorial and can be caused by tumor growth, metastasis, or side effects of treatment. In this case, the pain experienced by the patient when coughing and radiating to the back suggests the possible involvement of the pleura or other thoracic structures⁽¹⁰⁾.

The patient's vital signs, particularly an increased pulse rate (100x/minute) and respiratory rate (28x/minute), may be associated with a physiological response to pain. There is a positive correlation between pain intensity and increased pulse rate and respiratory rate in lung cancer patients. These changes in vital signs not only indicate acute pain but can also be important indicators in monitoring the effectiveness of pain interventions.

3. Sleep Pattern Disturbance Characterized by the Absence of a Sleep Partner and Pain Experienced

The nursing diagnosis of "sleep pattern disturbance" in this patient was established based on the patient's complaints of frequently waking up at night due to coughing and right chest pain, as well as objective signs such as frequent yawning, droopy eyes, and appearing weak and lethargic. Sleep disturbances in lung cancer patients are often caused by a combination of physical factors (such as pain and coughing) and psychological factors (such as anxiety and social isolation)¹².

The physical factors contributing to sleep disturbances in these patients are primarily right chest pain and coughing. There is a significant negative correlation between the intensity of physical symptoms such as pain and coughing and the quality of sleep in patients. In this case, effective symptom management, particularly the management of pain and coughing, is key to improving the quality of sleep in patients¹³.

c. Implementation and Evaluation

At the beginning of treatment, the patient was in a fairly serious condition. His respiratory status showed the presence of bloody sputum that was difficult to expel, with vital signs of BP 135/79 mmHg, pulse 108x/minute, RR 27x/minute, and temperature 36.6°C. Research by Oktaviani et al. (2023) states that the presence of blood-tinged sputum in lung tumor patients indicates complications that require immediate treatment. The pain felt was on a scale of 7 (NRS), which is classified as severe pain. The patient experienced sleep disturbances with a duration of only 5-6 hours per night. The patient's general condition at this stage was moderate with limited activity (bedrest). This is in line with the findings of Rahman et al. (2021), who reported that 85% of lung tumor patients experienced significant activity limitations in the early stages of treatment.

Then there was a development where the patient began to be able to expel yellowish sputum through effective coughing. Vital signs showed changes: BP 121/87 mmHg, pulse 101x/minute, showing a slight improvement from the previous day. According to Pratama et al. (2022), a change in sputum color from mixed with blood to yellowish may indicate a positive response to the therapy given. Pain intensity remains at a level of 6 (NRS), but the patient has begun to be able to perform light activities. Sleep quality has begun to improve with a decrease in the frequency of waking up at night. Fluid intake has increased to 2200 ml/day.

The third day showed stabilization of the patient's condition with vital signs: BP 123/80 mmHg, pulse 103 beats per minute, RR 27 breaths per minute. The patient reported that the nebulizer was very helpful in sputum production. Research by Hidayat et al. (2023) confirmed that consistent nebulizer therapy can increase the effectiveness of sputum production by up to 70% in patients with respiratory disorders. The pain scale remained at level 6 (NRS), but the patient was able to perform activities with the help of nurses. Sleep patterns improved with the implementation of muromottal therapy, and fluid intake reached 2500 ml/day, showing a significant increase from the previous day.

On the last day of observation, the patient showed significant progress. Vital signs were relatively stable: BP 125/76 mmHg, pulse 103x/minute, RR 26x/minute. Oxygen requirements decreased to 3-4L. Sari et al. (2023) stated that a gradual decrease in oxygen requirements indicates improved respiratory function. The pain scale decreased to 5 (NRS), indicating a positive response to the pain management provided. The most significant improvement was seen in the patient's sleep pattern, which was reported to

have improved, with the patient reporting much better sleep quality. Fluid intake increased to 2400 ml/day.

The patient still experienced significant coughing and shortness of breath. Vital signs showed BP: 120/74 mmHg, T: 36.6°C, HR: 100x/minute, RR: 26x/minute. The patient requires 3L of nasal cannula oxygen and experiences chest pain with a score of 5 (NRS). Research by Rahman et al. (2021) states that an increase in respiratory rate >24x/minute indicates respiratory distress that requires immediate intervention. There was slight improvement with decreased shortness of breath. Vital signs were relatively stable with BP: 123/86 mmHg, HR: 98 beats per minute. Pain scale decreased to 4-5 (NRS). According to a study by Kusuma et al. (2022), a decrease in pain scale indicates a positive response to the pain management provided.

Coughing with phlegm has decreased with improving shortness of breath. Vital signs show BP: 120/86 mmHg, HR: 95 beats per minute. Pain scale decreased to 4 (NRS). Wheezing and rales are still heard in both lung fields. The patient shows significant improvement with oxygen use decreasing to 2-3L. Vital signs recorded BP: 120/82 mmHg, RR: 25x/minute. Pain scale decreased to level 3 (NRS). According to research by Hartati et al. (2023), a decrease in oxygen requirements indicates improved respiratory function. Significant progress was made as the patient began to remove the oxygen, using it only when short of breath with a flow of 2L. Vital signs were stable with BP: 122/84 mmHg, HR: 97 beats/minute, RR: 25 breaths/minute. Pain scale decreased to 2 (NRS). Wijaya et al. (2021) confirmed that the patient's ability to wean off continuous oxygen dependence is an indicator of improved condition.

The condition continued to improve with only occasional shortness of breath and intermittent oxygen use. Vital signs showed BP: 121/82 mmHg, HR: 94 beats/minute, RR: 24 breaths/minute. Pain was reported to be resolved with a pain scale remaining at 2 (NRS). This is in line with the study by Putri et al. (2023), which states that a decrease in respiratory rate approaching normal is a sign of improvement in respiratory function. On the last day of observation, the patient's condition improved further with vital signs of BP: 123/86 mmHg, HR: 90 bpm, RR: 24 bpm. Coughing and sputum production decreased significantly, though still present. Breathing patterns improved with intermittent oxygen. Sari et al.'s (2022) study confirms that normalization of vital signs and reduction in respiratory symptoms indicate the success of nursing interventions.

4. Conclusion

The evaluation of the clients showed a gradual improvement in their condition from critical to increasingly better, with a significant decrease in: Respiratory rate from 27x/minute to 24x/minute, Pain scale from 7 to 2 (NRS), and Oxygen requirement from continuous to intermittent.

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