



Publish: Association of Indonesian Teachers and Lecturers

International Journal of Health Sciences (IJHS)Journal Homepage: <https://jurnal.agdosi.com/index.php/IJHS/index>

Volume 3 | Number 1 | March 2025 |

**Nursing Care For Patients With Respiratory System Problems Of Pleural Effusion In The Bougenvile Room Andi Makassau Pare-Pare Hospital**Ria Wahyuni^{1*}, Dwi Nur Aini², Mohammad Arifin Noor³, Rosmini Rasimin⁴, Juhelnita Bubun⁵, Abdul Rivai Saleh Dunggio⁶, Serly Sani Mahoklory⁷¹Midwifery Study Program, Sandi Karsa Polytechnic Makassar, Indonesia²Nursing Study Programs, Widya Husada University Semarang, Indonesia³Nursing Studies Programs, Sultan Agung Islamic University Semarang, Indonesia⁴Nursing Professional Education Study Program, Pelamonia Health Sciences Institute Makassar, Indonesia⁵Nursing Professional Education Study Program, Megarezky University, Indonesia⁶Nursing Study Programs, Maluku Ministry of Health Polytechnic of Health, Indonesia⁷Nursing Professional Study Programs, STIKes Maranatha Kupang, Indonesia**ABSTRACT**

Pleural effusion is the accumulation of fluid in the pleural space, a primary disease process is rare but usually occurs secondary to other diseases. Effusion can be a clear fluid, which may be a transudate, exudate or may be blood or pus. The purpose of the study is to carry out nursing care for clients experiencing pleural effusion at Andi Makkasau Pare-Pare Regional Hospital. The research method used is the case study research method, which is a study of humans (can be a group, organization or individual), events, backgrounds in depth, the purpose of the study is to obtain an in-depth picture of a case being studied, data collection is obtained from interviews, observations, and documentation. Based on the results of the assessment, the following nursing diagnoses can be formulated: Chest pain related to biological factors (especially tissue) and physical factors. Ineffective breathing patterns related to decreased lung expansion secondary to fluid accumulation in the pleural cavity.

Keywords: Relationship, Clean and Healthy Living Behavior, Knowledge, Personal Hygiene, Students, Gowa, South Sulawesi

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1. Introduction

Pleural effusion according to WHO (World Health Organization) is a symptom of a disease that can threaten the life of the sufferer. Geographically this disease is found throughout the world, even becoming a major problem in developing countries including Indonesia. In the United States, 1.5 million cases of pleural effusion occur each year, with the most common causes being congestive heart failure, bacterial pneumonia, malignancy, and pulmonary embolism. The severity of pleural effusion is determined by the amount of fluid, the rate of fluid formation, and the degree of pressure.

The prevalence of pleural effusion in Indonesia reaches 2.7 % of other respiratory tract infections. The high incidence of pleural effusion is found in several hospital data in Indonesia. Pleural effusion is a buildup of fluid in the pleural space, the primary disease process is rare but usually occurs secondary to other diseases. Effusion can be a clear fluid, which may be a transudate, exudate or can be blood or pus (Padila, 2021, Medical Surgical Nursing, second edition, page 119, Yogyakarta).

Pleural effusion is a collection of fluid in the pleural vacuum that exceeds normal limits (Taufan Nugroho, 2020, Nursing care, page 129, Yogyakarta). Pleural effusion is the accumulation of fluid in the pleural cavity. Pleural fluid normally seeps continuously into the chest cavity from the capillaries lining the parietal pleura and is reabsorbed by the capillaries and lymphatic system (Saunders, Elsevier 2021).

Pleural effusion is a condition when the pleural cavity is filled with fluid (fluid buildup in the pleural cavity occurs (Irman Soemantri, 2020. Nursing care for clients with respiratory system disorders, 2nd edition, page 106).

Pleural effusion is defined as the presence of an abnormally large amount of fluid in the space between the visceral and parietal pleura. Depending on the content of the fluid, the effusion can be a transudate or exudate; these two types have different causes and management strategies (Williams & Wilkins, 2018).

Pleural effusion is a condition in which there is an accumulation of fluid in the pleura in the form of transudate or exudate caused by an imbalance between production and absorption in the capillaries and visceral pleura (Arif Muttqin 2019).





Pleural effusion is the presence of pathological fluid in the pleural cavity. It should be noted that in normal people the pleural cavity also always contains fluid that functions to prevent the adhesion of the visceral pleura and parietal pleura, so that lung movement (expanding and shrinking) can run smoothly (Halim, 2018).

Pleural fluid accumulates if pleural fluid formation exceeds pleural fluid absorption. Normally pleural fluid enters the pleural cavity from capillaries in the parietal pleura and is transported via the lymphatic tissue located in the parietal pleura. Fluid can also enter the pleural cavity from the interstitial space of the lung through small holes in the diaphragm. The lymphatic system has a capacity to absorb 20 times more fluid than it normally produces. Therefore, pleural effusion can form if there is excessive fluid formation as follows (Harrison, 2018).

- a. Obstruction of fluid resorption from the pleural cavity, due to the presence of a blockage such as in cordis decompensation, kidney disease, Meig's syndrome (ovarian tumor) and superior vena cava syndrome. (Padila, 2021)
- b. Excessive fluid formation, due to inflammation (tuberculosis, pneumonia, viruses), bronchiostasis, amoebic suprenic abscess that penetrates the pleural cavity, due to tumors where bloody fluid enters and due to trauma (Padila, 2021).

In the pleural cavity there is ± 5 ml of fluid which is enough to wet the entire surface of the parietal pleura and visceral pleura. This fluid is produced by the parietal pleural capillaries due to hydrostatic pressure, colloid pressure and elastic attraction. Some of this fluid is reabsorbed by the pulmonary capillaries and visceral pleura, a small portion (10-12%) flows into the lymph vessels so that the fluid passage here reaches 1 liter per day. The accumulation of fluid in the pleural cavity is called pleural effusion, this occurs when the balance between production and absorption is disturbed, for example in hyperemia due to inflammation, changes in osmotic pressure (hypoalbuminemia), increased venous pressure (heart failure).

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2. Research Methods

Research method is a study of humans (can be a group, organization or individual), events, background in depth, the purpose of the study is to get an in-depth picture of a case being studied, data collection is obtained from interviews, observations, and documentation (Sujarweni, 2020). This case study was carried out on November 21, a study to explore the problem of nursing care for clients with Pleural Effusion who were undergoing treatment at Andi Makkasau Pare-pare Hospital.

3. Results and Discussion

1. Assessment

In a theoretical review of patients with Pleural Effusion, the clinical manifestations that can be found are shortness of breath, chest pain, dyspnea, cough, and weakness. In the case report, the results of the assessment were obtained in accordance with the theoretical review. At the assessment stage, the author did not find any significant obstacles because the patient and family were quite cooperative.

2. Nursing diagnosis

Nursing diagnosis is a clinical decision about the response of individuals, families and communities to health problems, as a basis for selecting nursing interventions to achieve nursing care goals in accordance with the nurse's authority (Setiadi, 2020, Concept of Writing Documentation: Theory and Application, Yogyakarta).

Based on the assessment of patients with pleural effusion, two priorities can be determined, namely "ineffective breathing pattern and acute pain". Ineffective breathing pattern can occur due to decreased lung expansion secondary to excessive





fluid accumulation in the pleural cavity, thus blocking access for O₂ to enter and exit the lungs.

The diagnosis of “acute pain” is established based on the results of a comprehensive assessment and based on the results of a physical examination. During the assessment, the patient was found to have chest pain radiating to the back and based on objective data, the pain scale was 6 and occurred when the client was doing heavy activities and when coughing.

3. Nursing intervention or planning is a design strategy to prevent, reduce and overcome problems that have been identified in the nursing diagnosis. Planning design describes the extent to which nurses are able to determine how to solve problems effectively and efficiently.

Intervention or planning is the process of determining the problem-solving goals to be achieved and formulating the steps.

4. Implementation

Nursing intervention or planning is a design strategy to prevent, reduce and overcome problems that have been identified in the nursing diagnosis. Planning design describes the extent to which nurses are able to determine how to solve problems effectively and efficiently. (Nikmatur Rohmah and Saiful Wahid, 2020).

Intervention or planning is the process of determining the problem-solving goals you want to achieve and compiling the steps.

5. Evaluation

Evaluation is an assessment by comparing changes in the patient's condition (observed results) with the objectives and outcome criteria created at the planning stage (Nikmatur Rohmah and Saiful Wahid, 2020,).

Evaluation or assessment stage is a systematic and planned comparison of the client's health with the established goals, carried out in a continuous manner involving the client, family and other health workers.

The purpose of the evaluation is to see the client's ability to achieve goals that are adjusted to the outcome criteria at the planning stage (Setiadi, 2020). At the evaluation stage in patients with a nursing diagnosis of "ineffective breathing patterns





and acute pain" not all problems are resolved. This is because the handling of cases requires a long time and collaborative actions with other experts while the implementation time of nursing care only lasts three days.

4. Conclusion

The conclusions in this study are as follows:

- 1) The results of the case study of nursing care for patients with Pleural Effusion in the Bougainvillea room at Andi Makassar Regional Hospital can be concluded that during the assessment, the patient's consciousness was found to be *compos mentis*, Physical examination results BP: 140/90 mmHg, S: 36°C, RR: 28x / minute, N: 80x / minute Thorax examination results Impression: Susp. Massive right pleural effusion.
- 2) Based on the results of the assessment, the following nursing diagnoses can be formulated: Chest pain related to biological factors (especially tissue) and physical factors. Ineffective breathing patterns related to decreased lung expansion secondary to fluid accumulation in the pleural cavity.
- 3) After formulating a nursing diagnosis, the next step is to prepare nursing interventions.
- 4) Furthermore, the implementation of nursing is carried out for three working days in accordance with the nursing interventions that have been prepared previously.
- 5) Nursing Evaluation is carried out at the end of each working hour. The results of the nursing evaluation obtained on the third day were that the patient's condition began to improve with the following results: Good general condition, *compos mentis* consciousness with GCS E4M6V5, BP: 110/60mmHg, N: 82x/m, S: 36°C, RR: 22x/m.

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