

# Analysis of Nursing Care in Dipsnea Et Causa Patients with Dextra Lung Tumors with Combination Therapy Pursed Lips Breathing and Eucalyptus Aromatherapy in the Gardena Room, RSD Dr. Soebandi Jember



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## ABSTRACT

**Introduction:** Lung tumor is a pathological disease that attacks the lungs with the appearance of abnormal cells and one of the symptoms is shortness of breath. The emergence of shortness of breath can cause the supply of oxygen throughout the body to be disrupted. **Purpose:** This study aim to giving combination therapy of Pursed Lips Breathing and Eucalyptus aromatherapy is to reduce the patient's shortness of breath. **Methods:** This research is a case study to evaluate interventions given to patients with lung tumors packaged in nursing care. Intervention is given 2x every day for 5-15 minutes for 4 days. Success indicator is measured by oxygen saturation. **Result:** The results showed that the intervention given for 4 days of clients shortness of breath decreased as evidenced by SpO<sub>2</sub> 86% to 93%. **Discussion:** Pursed Lips Breathing exercise will increase the movement of the diaphragm which will add volume to the lungs, with the inspiratory phase causing a decrease in muscle workload and a long expiratory phase causing residues to decrease thereby increasing gas exchange. Giving eucalyptus aromatherapy containing essential oils by dropping it in hot water can change eucalyptus essential oil in aerosol form so that it reaches the respiratory organs and is deposited in the lungs and complaints of shortness of breath can be reduced. **Conclusion:** The decrease in shortness of breath showed that the combination therapy intervention of Pursed Lips Breathing and Eucalyptus aromatherapy was effective in reducing the degree of shortness of breath in lung tumor patients.

**Keywords:** Dipsnea, Pursed Lips Breathing, Eucalyptus aromatherapy

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## INTRODUCTION

The human body has several organs that can work for the body on an ongoing basis, one of which is the lungs which function as respiratory organs in meeting the body's oxygen needs. The respiratory system is a process of turning on oxygen (O<sub>2</sub>) from outside the body and removing carbon dioxide (CO<sub>2</sub>) which is the residue from the oxidation process and must be removed from the body. Disturbances in the respiratory system make the continuity of metabolism inadequate (Ekaputri et al., 2022). One of the diseases that can interfere with the respiratory system is a lung tumor.

Based on the World Cancer Research Fund International (WCRF) data for 2020 lung cancer cases reached 2.2 million cases with the most cases in Hungary with 50.1% of cases, Serbia with 47.3% of cases, and France with 42.9% of cases (WCRF International, 2022). In Indonesia, in 2020 lung cancer cases are in third place with 34,783 cases and are the main cause of mortality from cancer, namely 13.2% (Fadillah & Sumarni, 2022). The provinces with the most lung cancer cases in 2019 were East Java, DKI Jakarta, Central Java, West Java and South Sumatra (Dewi et al., 2021). According to data

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from the Department of Lung and Respiratory Hospital Persahabatan, the majority of lung cancer sufferers are 67% male and 32% female, both of whom have a history of smoking (Direktorat Jendral Pencegahan dan Pengendalian Penyakit, 2018).

Pursed Lips Breathing is a non-pharmacological therapy that can be applied to reduce shortness of breath. Pursed Lips Breathing can improve alveoli ventilation, regulate and coordinate breathing rate so that breathing is more effective and the degree of shortness of breath can be reduced. This therapy is carried out by controlling the inspiration and expiration of breathing so that breathing becomes regular and complaints of difficulty breathing can be reduced (Lina et al., 2019). Apart from breathing exercise therapy, complaints of shortness of breath can also be reduced by aromatherapy. Eucalyptus aromatherapy is an effort that can be given to patients who experience shortness of breath. The content of essential oils in Eucalyptus can help relieve nasal congestion, secretions, and shortness of breath. The use of Eucalyptus aromatherapy given by inhalation and combined with warm water vapor will expedite the respiratory tract and can loosen secretions if there are secretions in the respiratory tract (Alamsah et al., 2022). With the description above, it attracted researchers to conduct research with the title

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**METHOD**

The research method uses a case report approach, namely by describing or describing individual circumstances through a scientific series in order to gain knowledge from an event. In this study, the subjects studied were patients with right lung tumors with impaired oxygenation requirements (dipsnea) who were treated at the Gardena Room at RSD Dr. Soebandi Jember. In collecting data, the steps taken are starting with anamnesis, physical examination, and documentation study. The next stage is to analyze the problem, determine the diagnosis, plan the action, implement the action, and evaluate the action. Presentation of data on cases is presented in the form of nursing care.

**RESULT**

Therapy that has been carried out on patients for 4 days shows a decrease in the degree of tightness which includes:

**Table 1. Intervention Observation Results**

| Component           | Day 1 (17/01/2023)         |                                  | Day 2 (18/01/2023)         |                           | Day 3 (19/01/2023)               |                                  | Day 4 (20/01/2023)         |                                  |
|---------------------|----------------------------|----------------------------------|----------------------------|---------------------------|----------------------------------|----------------------------------|----------------------------|----------------------------------|
|                     | Before therapy (09.02 WIB) | After therapy (14.00 WIB)        | Before therapy (15.00 WIB) | After therapy (17.40 WIB) | Before therapy (20.00 WIB)       | After therapy (22.40 WIB)        | Before therapy (14.00 WIB) | After therapy (15.40 WIB)        |
| Breathing frequency | 26x/minute                 | 21x/minute                       | 27x/minute                 | 23x/minute                | 24x/minute                       | 20x/minute                       | 21x/minute                 | 20x/minute                       |
| SpO2                | 86%                        | 90%                              | 89%                        | 94%                       | 93%                              | 95%                              | 92%                        | 93%                              |
| Breathing pattern   | Tachypnea                  | Normal                           | Tachypnea                  | Normal                    | Normal                           | Normal                           | Normal                     | Normal                           |
| Breath effort       | Elongated inspiration      | Inspiration and expiration match | Elongated inspiration      | Normal                    | Inspiration and expiration match | Inspiration and expiration match | Elongated expiration       | Inspiration and expiration match |
| Rhythm              | Irregular                  | Regular                          | Irregular                  | Regular                   | Regular                          | Regular                          | Regular                    | Regular                          |
| Breath sound        | Vesicular                  | Vesicular                        | Vesicular                  | Vesicular                 | Vesicular                        | Vesicular                        | Vesicular                  | Vesicular                        |

Based on table, produced several changes before and after the administration of therapy. Before giving therapy on day 1 the patient often complained of shortness of breath with a RR of 26x/minute and SpO2 of 86% and after being given therapy the client said that his breathing felt more relieved and complaints of shortness of breath decreased as evidenced by an RR of

21x/minute and SpO2 of 90%. On day 2 the patient still complained of shortness of breath when lying down with RR 27x/minute and SpO2 89% and after being given therapy the patient said his breath felt more relieved with RR 23x/minute and SpO2 94%. On the 3rd day the patient said that the tightness had begun to decrease with RR before being given therapy

24x/minute and SpO<sub>2</sub> 93% and the researchers continued giving therapy so that the RR became 20x/minute with SpO<sub>2</sub> 95%. On the last day, the patient said that his shortness of breath had improved with a RR before being given therapy 21x/minute but the SpO<sub>2</sub> was low, namely 92%, so the patient was given therapy and showed an RR of 20x/minute and a SpO<sub>2</sub> of 93%.

## DISCUSSION

Administration of a combination therapy of Pursed Lips Breathing and eucalyptus aromatherapy for 4 days in Mr. S with shortness of breath is effective in reducing the patient's shortness of breath. The implementation was carried out for the first patient by giving Pursed Lips Breathing respiratory fatigue for 5 minutes, then after an interval of 1 hour the patient was continued by giving Eucalyptus aromatherapy for 10 minutes. The therapy given showed an improvement in the patient's condition, namely complaints of shortness of breath could be reduced. In line with research from Lina et al (2019) that before being given Pursed Lips Breathing therapy, the degree of shortness of breath in COPD patients was moderate in 9 people and after being given Pursed Lips Breathing therapy, the degree of shortness of breath in patients became mild in 10 people. It is supported by the research of Smeltzer & B.G (2013) that the administration of Pursed Lips Breathing therapy can improve shortness of breath because it can stimulate expulsion of obstructions in the respiratory system so that the reversibility of the obstruction improves.

According to Kurniawan & Setiawan (2022) pursed lips breathing exercises also have a positive impact on tachypnoea in patients with asthma complaints. In addition, the therapy of Eucalyptus aromatherapy is also in line with research from Alamsah et al (2022) that there is an effect between steam inhalation and administration of Eucalyptus aromatherapy on reducing shortness of breath. Also supported by research from Pramudaningsih & Afriani (2019) that giving aromatherapy through steam inhalation can reduce respiratory frequency in bronchial asthma patients and have a significant effect.

In the provision of evidence-based practice therapy, the administration of pursed lips breathing exercises and aromatherapy to dyspnea patients showed that the patient experienced a

decrease in the degree of tightness. However, to reduce the degree of shortness of breath, during treatment the patient also received O<sub>2</sub> nasal canul 4 lpm therapy which was used by the patient after installation. In this study, administration of O<sub>2</sub> therapy may be a confounder of the results that have been obtained. In addition, the main journal as a reference in giving therapy implements therapy for 3 days for pursed lips breathing and 5 days for eucalyptus aromatherapy therapy, but in this study the implementation was carried out for 4 days because of out of hospital patients. With this in mind, the therapy given for 4 days was able to improve the patient's shortness of breath and was inseparable from the confounding factors above.

## CONCLUSION

The combination therapy of Pursed Lips Breathing and Eucalyptus aromatherapy is an attempt to reduce the degree of shortness of breath with breathing exercises and steam inhalation. Based on the results of giving a combination of Pursed Lips Breathing and Eucalyptus aromatherapy to patients with dyspnea, it was shown that there was a decrease in shortness of breath. The intervention was carried out for 4 days within 15 minutes per day. The decrease in complaints of shortness of breath from the start before giving therapy showed the results of RR 26x/minute to 20x/minute, SpO<sub>2</sub> 86% to 93%, tachypnea breathing pattern became normal, inspiratory effort lengthened to inspiration and expiration matched, and irregular rhythm became regular. By reducing the client's shortness of breath, it is hoped that the client's respiratory ventilation will improve and the ineffective breathing pattern will become effective.

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