INDOGENIUS

ISSN 2828-1365

Special Issue (2025) : 102 – 106

Application of Breathing Relaxation Technique on Pain Management in Patients with Congestive Heart Failure (CHF) in the ICCU Ward of RSD Gunung Jati, Cirebon City

Ahmad Syaripudin[1], Fenty Oktaviani[1]
[1]*Institut Teknologi dan Kesehatan Mahardika, Cirebon, Indonesia*

Article Info

Keywords :
Congestive Heart Failure, Pain Management, Deep Breathing Relaxation Technique

Corresponding Author :
Fenty Oktaviani
E-mail :
fentyoktaviani5@gmail.com

ABSTRACT

Background & Objective: The prevalence of heart disease in Indonesia, according to the 2018 Basic Health Research (Riskesdas), reached 1,017,290 cases, while in West Java Province there were 186,809 cases. To apply the intervention of deep breathing relaxation technique to Mr. A, a patient with congestive heart failure (CHF), focusing on pain management nursing care in the ICCU Ward of RSD Gunung Jati, Cirebon City. **Method:** This research used a case study design. The subject was one patient with CHF and pain management problems. Data collection methods included anamnesis, physical assessment, direct observation, and medical records. Nursing care was carried out for 3 days according to the shift schedule. **Results:** After applying deep breathing relaxation for three consecutive days, 10–15 minutes each session, the pain scale decreased from 6 (Numeric Rating Scale/NRS) to 2 (NRS). **Conclusion:** The application of deep breathing relaxation technique can reduce pain in CHF patients in the ICCU Ward of RSD Gunung Jati, Cirebon City.

DOI: doi.org/10.56359/igj.v4i2A.725

Introduction

According to the World Health Organization (WHO, 2021), cardiovascular diseases (CVDs) are the leading cause of death globally. It is estimated that 17.9 million people died from CVDs in 2019, accounting for 32% of all global deaths. Of these deaths, 85% were caused by heart attacks and strokes. More than three-quarters of CVD deaths occur in low- and middle-income countries. Of the 17 million premature deaths (under the age of 70) due to non-communicable diseases in 2019, 38%

were caused by CVDs. The prevalence of heart disease in Indonesia, according to Riskesdas 2018, reached 1,017,290 cases, with 186,809 cases in West Java Province.

One of the most common symptoms experienced by CHF patients is chest pain, caused by an imbalance between myocardial oxygen demand and supply in patients with coronary artery disease (Serly, Evelyn Grace, Suryati, 2023).

Non-pharmacological therapy is one of the independent nursing interventions to reduce patient pain, including relaxation techniques, massage, compresses, music therapy, murottal, distraction, and guided imagery (Ismoyowati W.T., Teku Desisi S.I., Banik Christin J., et al., 2021). One complementary therapy is deep breathing relaxation.

Deep breathing relaxation can reduce pain intensity through three mechanisms. First, by relaxing muscle spasms caused by prostaglandins, which leads to vasodilation and increased blood flow to ischemic areas. Second, deep breathing relaxation stimulates the release of endogenous opioids such as endorphins and enkephalins. Third, the technique is easy to perform because it does not require special equipment and mainly involves muscular and respiratory systems, making it practical and applicable anytime (Hasan & Siska, 2022). According to Djamil Achmad, Yuliana Dewi, and Arini Mia (2019), applying deep breathing relaxation increases oxygen supply to tissues, thereby reducing pain levels.

Objective

To provide nursing care for Mr. A with congestive heart failure (CHF) focusing on pain management through the application of deep breathing relaxation technique in the ICCU Ward of RSD Gunung Jati, Cirebon City.

Method

This study employed a case study design. Data were collected following the nursing process: assessment, nursing diagnosis, intervention planning, implementation, and evaluation. The study population was CHF patients admitted to the ICCU Ward. The sampling technique used was purposive sampling, with one CHF patient who had pain management problems. The study was conducted in January 2025 for three days at the ICCU Ward of RSD Gunung Jati, Cirebon City. Data were collected using anamnesis, physical assessment, direct observation, and medical records. Data were analyzed descriptively from the assessment stage and documented over three days to monitor patient progress.

Results

The subject was Mr. A, 62 years old, male, junior high school education, self-employed, admitted to the ICCU Ward. He was accompanied by his 44-year-old wife (junior high school education, housewife), with two children (one son and one daughter).

Medical history: Heart disease (2018), hypertension, no history of allergies or surgery. Chief complaint: left chest pain radiating to the back for one day, triggered by activity, relieved by rest, described as pressing pain, pain scale 6/10 (NRS), lasting ⩽15 minutes, intermittent, with shortness of breath and easy fatigue. Diagnosis: Congestive Heart Failure (CHF).

Physical examination: Conscious (compos mentis), GCS 15, blood pressure 160/90 mmHg, pulse 98 bpm, respiration 27 bpm, temperature 36.5 ℃. Respiratory system: dyspnea, no tenderness, rapid chest wall retraction, vesicular sounds, on oxygen 3 L/min via nasal cannula. Cardiovascular system: left chest pain, no lesions or edema, muffled heart sounds, S1 and S2 with gallop rhythm, CRT < 2 sec. Other systems (GI, endocrine, musculoskeletal, urinary, integumentary, sensory perception) showed no complaints.

Nursing diagnosis: Acute Pain.

Expected outcomes: Within 3 × 24 hours (three nursing sessions), pain level decreases (NRS), with reduced complaints of pain, restlessness, and sleep disturbances.

Interventions:

- Observation: Identify pain location, duration, frequency, characteristics, quality, and intensity; assess pain scale and non-verbal responses.
- Therapeutic: Provide non-pharmacological techniques to reduce pain.
- Collaborative: Administer analgesics as indicated.

Implemented intervention: pain management through deep breathing relaxation technique.

Discussion

The application of deep breathing relaxation techniques carried out by the researcher for three consecutive days with a duration of 10–15 minutes, repeated for each subject, showed that the patient and family were cooperative in performing the technique daily. Both the patient and family understood that the deep breathing relaxation technique should be practiced whenever the patient experienced chest pain. Before the intervention, the pain scale was 6 according to the Numeric Rating Scale (NRS). After three days of applying the deep breathing relaxation technique, the pain scale decreased to 2 according to the NRS.

This finding is consistent with the study by Serly, Evelyn Grace, and Suryati (2023), which stated that CHF (Congestive Heart Failure) patients at RSUD Bayu Asih Purwakarta experienced a gradual decrease in chest pain scale after undergoing deep breathing relaxation for three days. According to Pratiwi S.H. and Fibriyanti E. (2025), in their case report of a CHF patient with acute pain nursing problems in the Emergency Department of RSUD Wates Kulon Progo, a positive change was observed after 7 hours of therapy, with chest pain intensity decreasing from a scale of 5 to 4 on the NRS. Meanwhile, Zikry A., Apriza, and Ningsih F.N. (2024) in their study of nursing care for Mr. S with CHF at the Mawar Ward of RSUD Arifin Achmad, Riau

Province, reported that after three days of deep breathing relaxation therapy—conducted by practicing deep inhalation—the chest pain scale decreased from 5 to 2 according to the NRS.

Based on the above findings, the researcher concludes that providing deep breathing relaxation techniques for pain management in Mr. A with Congestive Heart Failure (CHF) at the ICCU Ward of RSD Gunung Jati, Cirebon City, had a significant effect in reducing pain when applied for three consecutive days with a duration of 10–15 minutes in patients with pain management problems.

Conclusion

Based on this case study of Mr. A with Congestive Heart Failure (CHF), deep breathing relaxation effectively reduced acute chest pain. Initial assessment revealed left chest pain radiating to the back, history of heart disease (2018) and hypertension, with pain scale 6 (NRS).

After three consecutive days of intervention, pain was reduced to scale 2 (NRS), evidenced by the absence of grimacing. Therefore, deep breathing relaxation is recommended as a non-pharmacological pain management technique for CHF patients.

References

Djamil, Achmad, Dewi Yuliana, and Mia Arini. "Distraksi Menonton Efektif Menurunkan Nyeri Ringan Pasien Congestive Heart Failure (CHF)." *Jurnal Kesehatan* 10.3 (2019): 459-465.

Ismoyowati, T. W., Teku, I. S. D., Banik, J. C., & Sativa, R. A. O. (2021). Manajemen Nyeri untuk *Congestive Heart Failure*. Jurnal Penelitian Kesehatan" SUARA FORIKES"(Journal of Health Research" Forikes Voice"), 12(1), 107-112.

Kementrian Kesehatan Republik Indonesia. 2018. Laporan Nasional Riskesdas. Badan Penelitian dan Pengembangan. https://repository.badankebijakan.kemkes.go.id/id/eprint/3514/

M. Hasan Azhari. Siska Delvia. (2022). Studi Literatur Penerapan Teknik Relaksasi Nafas Dalam Terhadap Penurunan Skala Nyeri Dada Akut Pada Pasien Dengan Congestive Heart Failure (CHF).Jurnal Kesehatan Akper Kesdam II Sriwijaya Palembang, Volume 11 No. 2, April 2022.

PNI. (2017). Standar Diagnosa Keperawatan Indonesia: Definisi dan Indikator, Diagnostik, Edisi 1. Jakarta: DPP PPNI. Edisi 1. Jakarta: DPP PPNI.

PPNI. (2018). Standar Intervensi Keperawatan Indonesia: Definisi dan Tindakan, Keperawatan, Edisi 1. Jakarta: DPP PPNI.

PPNI. (2018). Standar Luaran Keperawatan Indonesia: Definisi dan Kriteria Hasil, Keperawatan, Edisi 1. Jakarta: DPP PPNI.

Pratiwi, H. S., & Fibriyanti, E. (2025, March). Laporan Kasus Pada Pasien *Congestive Heart Failure* (CHF) Dengan Masalah Keperawatan Nyeri Akut di Ruang IGD RSUD Wates Kulon Progo. In Prosiding Seminar Nasional Penelitian dan Pengabdian Kepada Masyarakat LPPM Universitas' Aisyiyah Yogyakarta (Vol. 3, pp. 1182-1191).

Serly, S., Evelyn, G., & Suryati, S. (2023). Penerapan Terapi Relaksasi Nafas Dalam Untuk Mengurangi Skala Nyeri Dada Pada Pasien *Congestive Heart Failure* (CHF) Yang Sedang Di Rawat Di Rsud Bayu Asih Purwakarta. Jurnal Cakrawala Ilmiah, 3(1), 353-360.

World Health Organization. 2021. The Top 10 Causes Of Death. https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death

Zikry, A., Apriza, A., & Ningsih, N. F. (2024). Asuhan keperawatan pada Tn. S dengan pemberian Teknik Terapi Relaksasi Nafas Dalam terhadap Penurunan Nyeri Dada dengan Diagnosa *Congestive heart failure* di ruangan mawar RSUD Arifin Achmad Pekanbaru. Excellent Health Journal, 3(1), 316-320.