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Implementation Of The Semi Fowler Position To Improve The Effectiveness Of Breathing Patterns In Congestive Heart Failure (CHF) Patients At Vita Insani Pematangsiantar Hospital

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ABSTRACT

Congestive Heart Failure (CHF) or called congestive heart failure where the heart is unable to pump enough blood to the human body's organs and other tissues. Symptoms that usually appear in sufferers of Congestive Heart Failure (CHF) are shortness of breath, weakness and fatigue, swollen ankles or stomach due to fluid buildup, increased respiratory frequency. The non-pharmacological action taken for Congestive Heart Failure (CHF) patients is giving the semi-Fowler position. This research design uses a case study method with 2 respondents through interviews and physical examination. The results of the study showed that after the nursing action was carried out, Mrs. N and Mr. A found a decrease in respiratory frequency in Mrs. N 27x/minute becomes 20x/minute while in Mr. A 24 x/minute becomes 20 x/minute. The action of providing a semi-fowler position to improve the effectiveness of breathing patterns in sufferers of Congestive Heart Failure (CHF)

INTRODUCTION

Congestive Heart Failure (CHF) or more commonly known as heart failure is a clinical syndrome disease characterized by shortness of breath during breathing or during activity caused by abnormalities in the structure or function of the heart and heart failure is a condition of the heart that cannot pump enough blood to meet metabolic needs (Pembudi & Widodo, 2020). Congestive Heart Failure (CHF) is the only cardiovascular disease that continues to increase in incidence and prevalence. The risk of death from heart failure ranges from 5-10% per year in cases of mild and severe heart failure increases to 30-40%. In addition, heart failure is a disease that most often requires retreatment in the hospital even though outpatient treatment is given optimally (Kasron, 2021).

According to World Health Organization (WHO) data, the highest number of congestive heart failure sufferers is in the Southeast Asian Region, namely the Philippines, as many as 376.9 thousand people. Meanwhile, in Indonesia it ranks 2nd with a total of 371.0 thousand people. The prevalence of heart failure in various countries, namely from foreign countries such as Europe and North America, especially from low- and middle-income countries. Heart failure in Hong Kong is estimated at 4,452 people (2-3%), South Korea is estimated at 650 people (0.6%) (World Healt Organization, 2021).

According to data from the Ministry of Health in 2021, there are eight provinces with a higher prevalence of Congestive Heart Failure (CHF) when compared to the national prevalence. The eight prevalence are Aceh 1.6%, West Sumatra 1.6%, DKI Jakarta 1.9%, West Java 1.6%, Central Java 1.6%, East Kalimantan 1.9%, North Sulawesi 1.8%, and Central Sulawesi 1.9% (Ministry of Health, 2021).

Based on the 2018 Riskesdas Report, the prevalence of heart disease in Indonesia reached 1.5% (1,017,290) people, of which the prevalence in North Sumatra was 1.3% (55,351) people, with an urban prevalence of 1.6% (556,419) people and rural areas 1.3% (460,871) people. Cardiovascular diseases such as heart disease, and hypertension continue to increase every year and rank the highest. The prevalence of heart disease according to age characteristics in 2018 the highest rate was in the elderly who were >75 years old (4.7%) people and the lowest was at the age of <1 years (0.1%) then the

prevalence by gender in 2018 showed the highest rate in women, namely, women were 1.6% and in men there were 1.3% (Basic Health Research, 2018).

Based on the results of an initial survey at Vita Insani Pematangsiantar Hospital in 2021 which experienced Congestive Heart Failure (CHF) as many as 40 people, where in 2022 Congestive Heart Failure (CHF) increased to 517 people and in 2023 Congestive Heart Failure (CHF) increased by 2,280 people, while in the last 3 months data was obtained in October there were around 38 people suffering from Congestive Heart Disease Heart Failure (CHF), in November there were around 41 people suffering from Congestive Heart Failure (CHF), and finally in December there were around 11 people suffering from Congestive Heart Failure (CHF) at the hospital (Medical Records of Vita Insani Pematangsiantar Hospital, 2024).

The most common cause of Congestive Heart Failure (CHF) is coronary heart disease, other causes include the phenomenon of tense heart muscle, high blood pressure, heart attack, cardiomyopathy, heart valve disease, infection, cardiac arrhythmia, anemia, thyroid disease, lung disease and too much body fluids. The main nursing problem that occurs in CHF patients is the ineffectiveness of breathing patterns (Rahmawati, 2022).

Ineffectiveness of breathing patterns is an inspiration for funds or expirations that do not provide adequate ventilation. In CHF patients with ineffective breathing patterns, it occurs because the left ventricle is unable to pump blood coming from the lungs, resulting in increased pressure in the pulmonary circulation which causes fluid to be pushed into the lung tissue. CHF disease results in pulmonary dysfunction resulting in fluid accumulation in the alveoli. This causes the heart to not be able to function optimally in pumping blood. Another impact that arises is the changes that occur in the respiratory muscles. This results in the supply of oxygen to the whole body being disrupted, resulting in dyspnea (Ahmad, 2020).

The 45-degree Fowler semi-position uses gravity to help breathing, so that the oxygen entering the lungs will be more optimal so that patients can breathe more comfortably and will reduce the discomfort felt when they want to sleep (Rahmawati, 2022).

Based on Aisyah's research in 2020, the semi-fowler position is a position where the head and body are raised by 45º One of the interventions that can overcome ineffective breathing patterns is by providing oxygen therapy, physical therapy, and giving a semi-fowler position. The purpose of the semi-fowler position is to help overcome difficulties in breathing. The semi-fowler position intervention will be given for 3 days for 15 minutes and carried out at the same hour to determine the difference in oxygen saturation and respiratory rate before and after being given the semi-fowler position, it can be concluded that the semi-fowler position in patients with Congestive Heart Failure (CHF) with shortness of breath is able to increase oxygen saturation in patients.

Yuni & Ahmad (2020), this study was conducted to evaluate the effectiveness of semi-fowler position correction in reducing respiratory rate in patients with Congestive Heart Failure (CHF). Semi-fowler therapy is effective in reducing the frequency to less than 24x/minute and feeling comfortable when breathing.in patients with Congestive Heart Failure (CHF) with inefficient breathing patterns, it is better to get semi-fowler therapy to reduce oxygen consumption and improve the quality of maximum lung expansion, so that the breathing pattern of ineffective patients becomes more effective in Congestive Heart Failure (CHF) patients.

Melanie (2018) said that the semi fowler position (half-sitting position with a 45-degree position) for 3x24 hours is in accordance with SOPs. It helps reduce shortness of breath and helps optimize respiratory rate in clients with Congestive Heart Failure (CHF) so that the problem of ineffective breathing patterns can be resolved.

The role of nurses, according to Brunei & Suddrat, (2018) in patients with Congestive Heart Failure (CHF), namely advocating bed rest and activity restrictions, can reduce the workload of the heart so that oxygen supply can be delivered to all cells, including the heart itself. The role of nurses who accompany patients in 24 hours can be a benchmark for success in managing cardiac workload.

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Setting the right and comfortable position in patients is very important, especially patients who experience shortness of breath, giving a semi-fowler position is more comfortable and easier for patients to understand, but the semi-fowler position is more effective for reducing shortness of breath and increasing oxygen saturation by showing an average decrease in shortness of breath and an increase in oxygen saturation (Zahroh & Susanto, 2017).

METHOD

The type of research that will be used in this scientific paper is quantitative research. This study also uses a case study research design. This study aims to describe Nursing Care in patients with Congestive Heart Failure (CHF) by providing a semi-fowler position to increase the ineffectiveness of breath nutmeg at Vita Insani Pematangsiantar Hospital. The population used in this study is all patients suffering from Congestive Heart Failure (CHF) at Vita Insani Pematangsiantar Hospital. The number of samples used in this study amounted to 2 people.

RESULTS AND DISCUSSION

The nursing diagnosis obtained from Congestive Heart Failure (CHF) patients according to SDKI (SDKI WORKING GROUP TEAM, DPP, PPNI: 2017) is as follows: First Patient (1) : Ineffectiveness of breathing patterns related to hyperventilation characterized by the Client appearing shortness of breath RR: 27x/min, rapid breathing rhythm, ronchi breathing sounds, using nasal lobe breathing assist muscles, O2 nasal cannula 2L/min, TD: 130/90 mmhg, HR: 90x/i, Temp : 36, 4□C, Spo2 : 96%. Second Patient (2): Ineffectiveness of breathing patterns related to hyperventilation characterized by Client appearing shortness of breath RR: 27x/min, rapid breathing rhythm, ronchi breathing sounds, using nasal lobe breathing assist muscles, O2 nasal canul 2L/min attached, TD: 120/80 mmhg, HR: 80x/min, RR: 28x/min, Temp: 36, 4°c, Spo2: 96%

Discussion

In this discussion, the researcher will discuss the suitability and gap between the theoretical review and the case in client 1 on (Mrs. N), client II on (Mr. A) in implementing the semi-fowler position to improve the effectiveness of breathing patterns in patients with Congestive Heart Failure. Carrying out nursing care and semi-fowler position actions for 3 days which was carried out on Mrs. N on June 26 -June 28, 2024 and Mr. A on June 26 -June 28, 2024 in the ICU room of Vita Insani Hospital Pematang Siantar activities dilakukan meliputi pengkajian, diagnosa, intervensi, implementasi, dan evaluasi keperawatan.

A. Assessment of the First Patient and Second Patient

The results of the assessment obtained several data on both patients. The results of the assessment were obtained that the first patient with the initials Mrs. N was 57 years old and the patient with the initials Mr. A was 65 years old who experienced shortness of breath. The results of this study are almost the same as the previous research journal Aisyah in 2020 which said that the results of her study took 2 female respondents who experienced shortness of breath. The incidence of Congetive Heart Failure (CHF) in women is more common than in men, with a prevalence of 1.6%, and men 1.3% (Basic Health Research 2018).

Based on the results of the anamnesis of the two clients experiencing shortness of breath from the results of the physical examination, it was found that the data from both patients experienced an increase in tachypneal respiratory frequency of >20x/minute. The results of a study conducted by Aisyah (2020) showed that after being given a semi-fowler position for 15 minutes, the result of an increase in respiratory frequency was obtained from 27xmin to 26x/min. The research conducted by melanie (2018) with the same problem, namely shortness of breath, the use of breathing muscles of the nasal lobes and the implementation of giving a semi fowler position for 3 days, namely 2x eday within 25-30 minutes.

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Symptoms commonly found in patients with Congestive Heart Failure (CHF) are shortness of breath, coughing, chest pain, increased frequency of breathing. This is stated in a theoretical review where the first patient and the second patient experience shortness of breath and cough which are symptoms experienced by Congetive Heart Failure (CHF) patients (Aspani, 2018).

B. Nursing Diagnosis

Based on the results of the study, physical examination, observations that have been carried out and data analysis, it was found that the nursing diagnosis was in accordance with the problems that arose in patients 1 and 2 with Congestive Heart Failure (CHF) is the ineffectiveness of breathing patterns related to hyperventilation characterized by the client complaining of shortness of breath. This data is in accordance with the Indonesia Nursing Diagnostic Standards (SDKI PPNI Working Group Team, 2018). The characteristics of nursing diagnosis of ineffectiveness of breathing patterns are:

a. Causes: threat to death, threat to decreased lung expansion, lack of knowledge and hereditary factors.
b. Major signs and symptoms: changes in heart rhythm, the client complains of shortness of breath and pain in the right chest causing difficulty sleeping.
c. Minor signs and symptoms: abnormal breathing patterns, decreased vital capacity, decreased nasal lobe breathing.

C. Nursing Intervention

The outcomes in nursing care are adjusted to nursing diagnoses that have been enforced in accordance with the guidelines of the Indonesia Nursing Output Standards book (SLKI PPNI Working Group Team, 2018). The nursing output in this study was improved breathing patterns with decreased hay dyspnea criteria and improved breathing frequency.

This intervention in nursing care is taken from the book Indonesia Nursing Intervention Standards (SIKI PPNI Working Group Team, 2018). The nursing care plan carried out on the two patients is to monitor breathing patterns for example (frequency, depth, and breath effort), monitor additional breathing sounds for example (gurgling, wheezing, wheezing), position the semi fowler or fowler, give warm water, do chest physiotherapy, if necessary, give oxygen, if necessary (SIKI PPNI Working Group Team, 2018).

D. Nursing Implementation

After the nurse plans the actions to be taken on the patient, then the nurse carries out nursing actions to meet the patient's needs and overcome the patient's problems. Nursing treatment given to patients with breathing patterns was ineffective by giving a semi-fowler position to both patients with an action time of 15-20 minutes. In accordance with the plan, namely monitoring breathing patterns, positioning the semi-fowler, giving oxygen, then the nurse teaches non-pharmacological techniques (semi-fowler position) this exercise is carried out for 3 days, namely 2x a day in 15-20 minutes according to Aisyah (2020). The implementation given in this study is the semi-fowler position carried out by 2 respondents who are male and female in the first patient Mrs. N and the second patient Mr. A

E. Nursing Evaluation

Evelauasi in this nursing care aims to find out the results of actions and changes in the patient's condition after the semi-fowler position is performed from the first day to the third day. On the first day before being given the semi-fowler position, the respiratory rate on Mrs. N was 27x/minute to 23x/minute, on the second day the respiratory rate was 26x/minute to 24x/minute, on the third day the respiratory rate was 23x/minute to 21x/minute while on the first day Mr. A was 28x/minute to 26x/minute, on the second day 26x/minute to 23x/minute, and on the third day 23x/minute to 22x/minute.

After 3 days of nursing care in the hospital by teaching and explaining the action of giving a semi-fowler position to increase the effectiveness of breathing patterns, it shows that there is a change in breathing frequency, this can be seen from the related journal, namely according to Melanie (2018). According to the journal Aisyah (2020) showed that there was a decrease in shortness of breath after being given nonpharmacological measures (semi-fowler position), during the study it was found that there was shortness of breath, the use of breathing support muscles, with nursing problems of breathing patterns were not effective. Nursing planning uses a semi-fowler position with an angle of 30-45o. Implementation is carried out based on SOP for 3 days within 15-20 minutes. The evaluation showed that there was a decrease in respiratory frequency and shortness was no longer felt after being given the semi-fowler position. It is hoped that the semi-fowler position can be applied as one of the interventions in nursing care in patients with Congestive Heart Failure (CHF) with oxygenation problems. Reportable evaluation of the problems experienced by patients, namely ineffective breathing patterns to effective napaf patterns (SLKI DPP PPNI Working Group Team, 2019).

CONCLUSION

Congestive Heart Failure (CHF) is a congestive heart failure in which the heart is unable to pump blood to the organs of the human body as well as to other tissues. Symptoms that appear in patients with Congestive Heart Failure (CHF) are shortness of breath, weakness and fatigue easily, swollen ankles or abdomen due to fluid accumulation, increased respiratory frequency. The nursing assessment stage was carried out for 3 days on Mrs. N and Mr. A, the author found similarities between Mrs. N and Mr. A experienced shortness of breath while carrying out daily activities, the client's skin color looked pale. Examination of the respiratory frequency of the patient Mrs. N when studied was 27x/minute while when Mr. A was examined 24x/minute, the client complained of difficulty sleeping due to shortness of breath felt, feeling weak, activities assisted by family or nurses. The nursing problem of Mrs. N and Mr. A is the same, namely the breathing pattern is ineffective because the breathing pattern in both patients is shortness of breath where the respiratory rate value of the two patients is above the normal value (1-20x/minute) and the action given by the two patients is the provision of a semi-fowler position to increase the effectiveness of the breathing pattern.

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